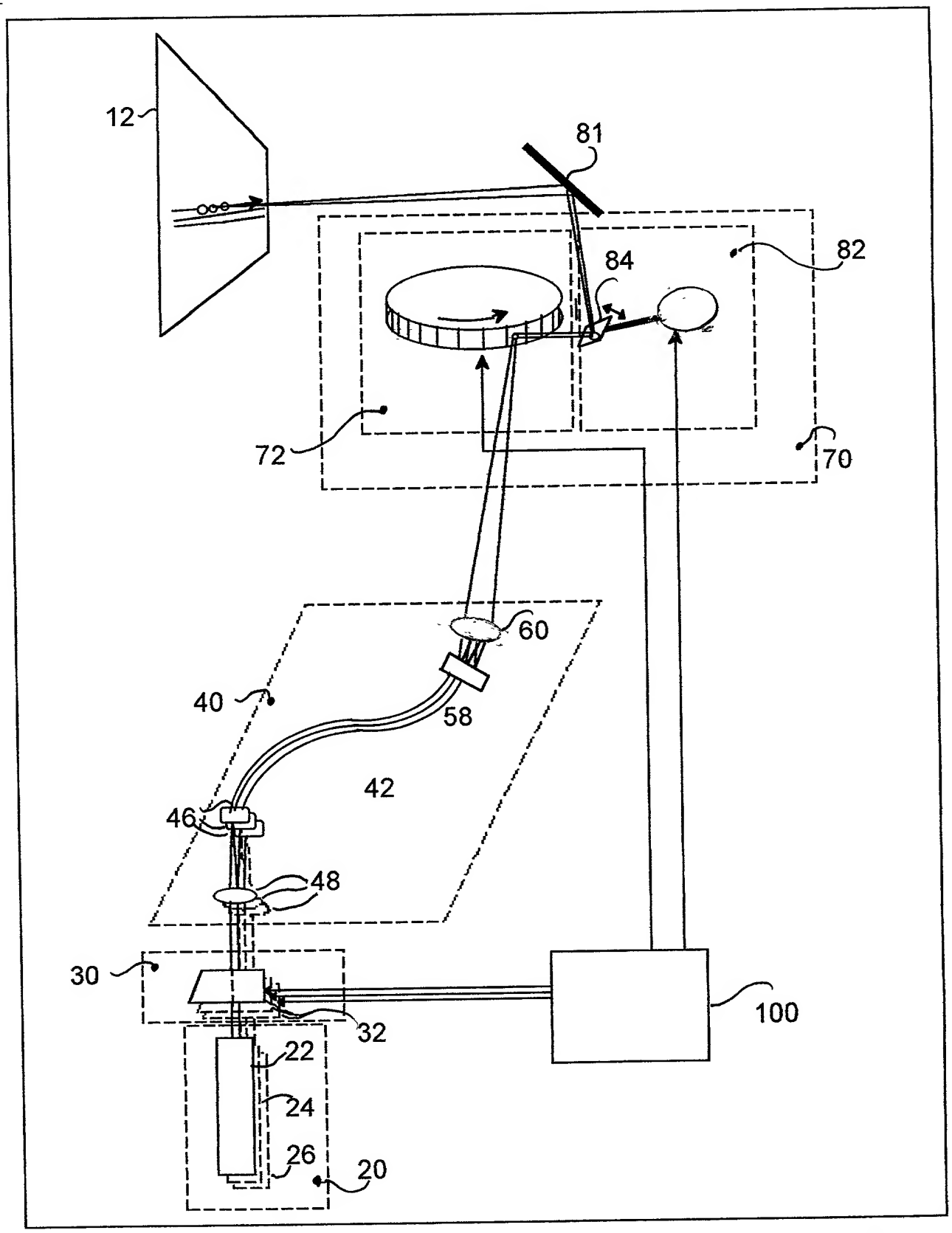


FIG. 1

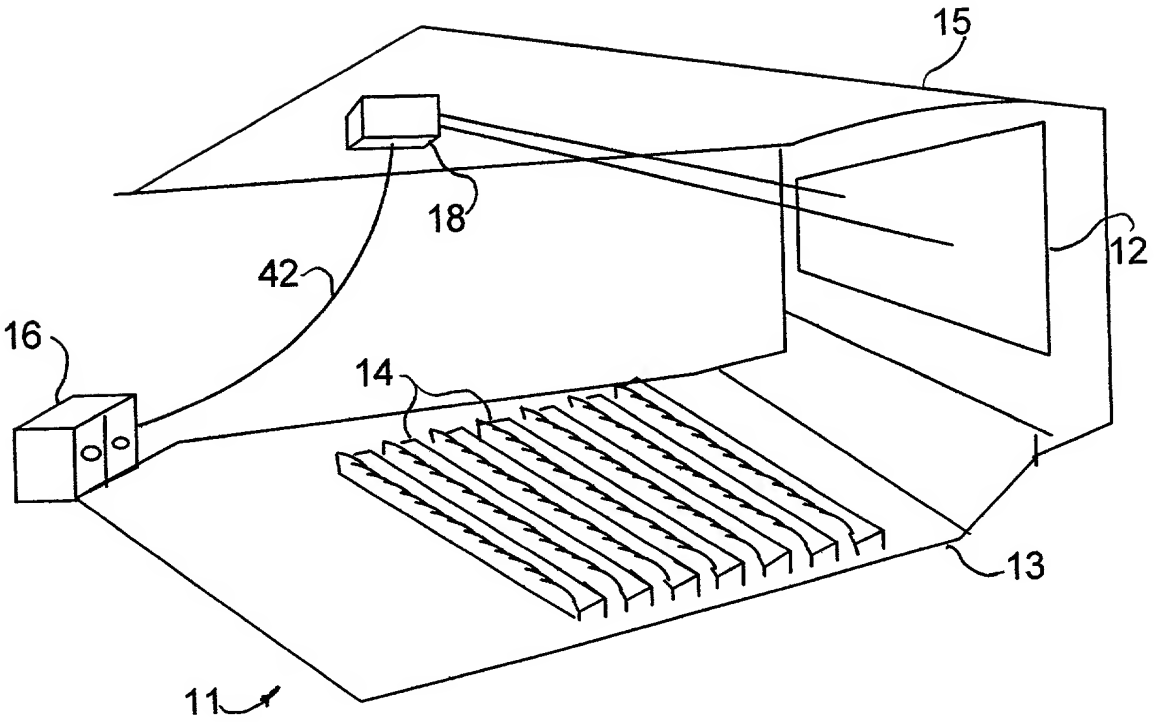


FIG. 2

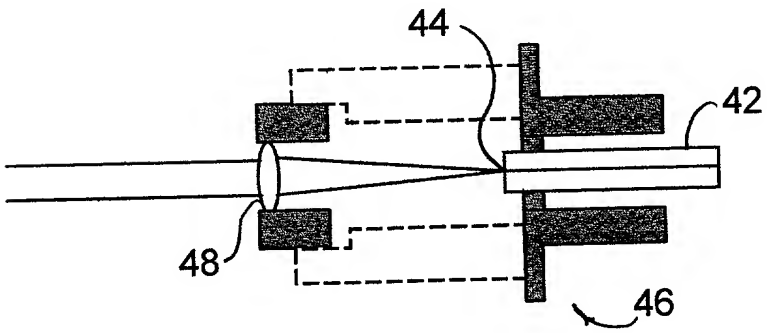


FIG. 3

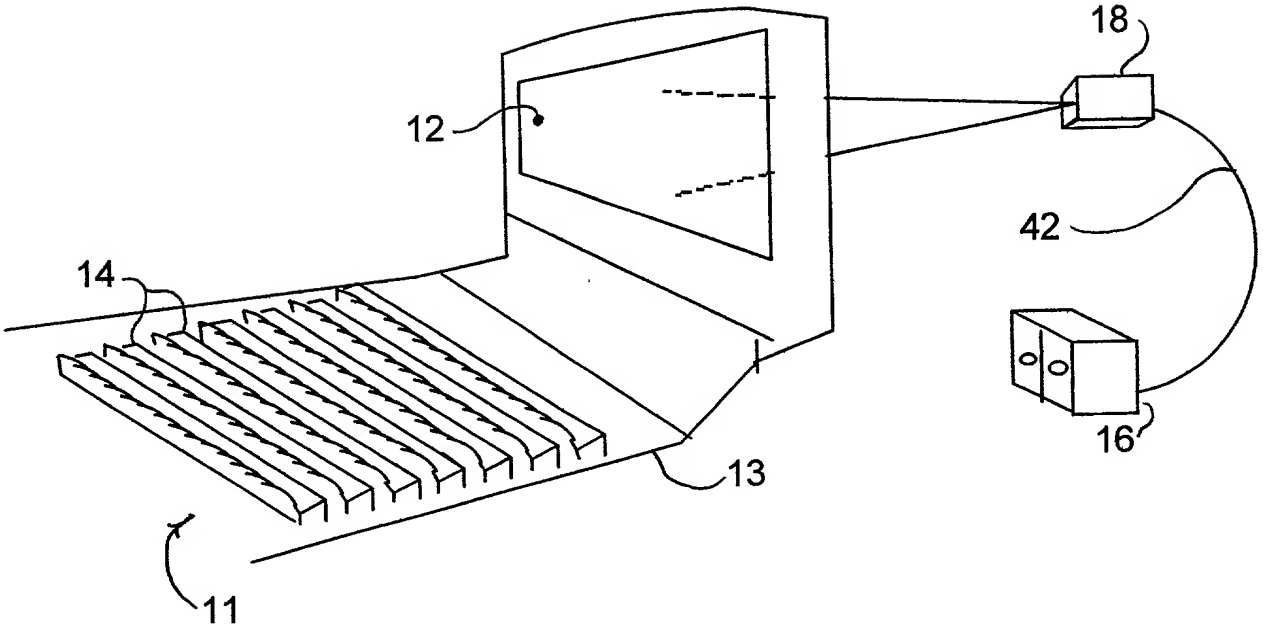


FIG. 4

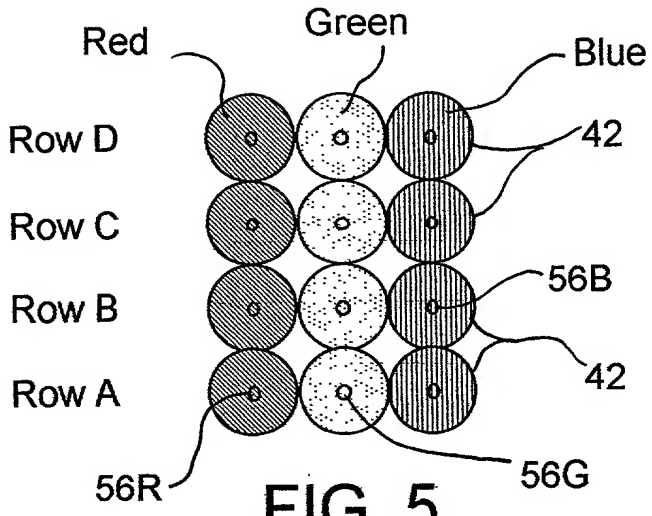

Red
Green
Blue
Row D
Row C
Row B
Row A
42
42
56B
56R
56G

FIG. 5

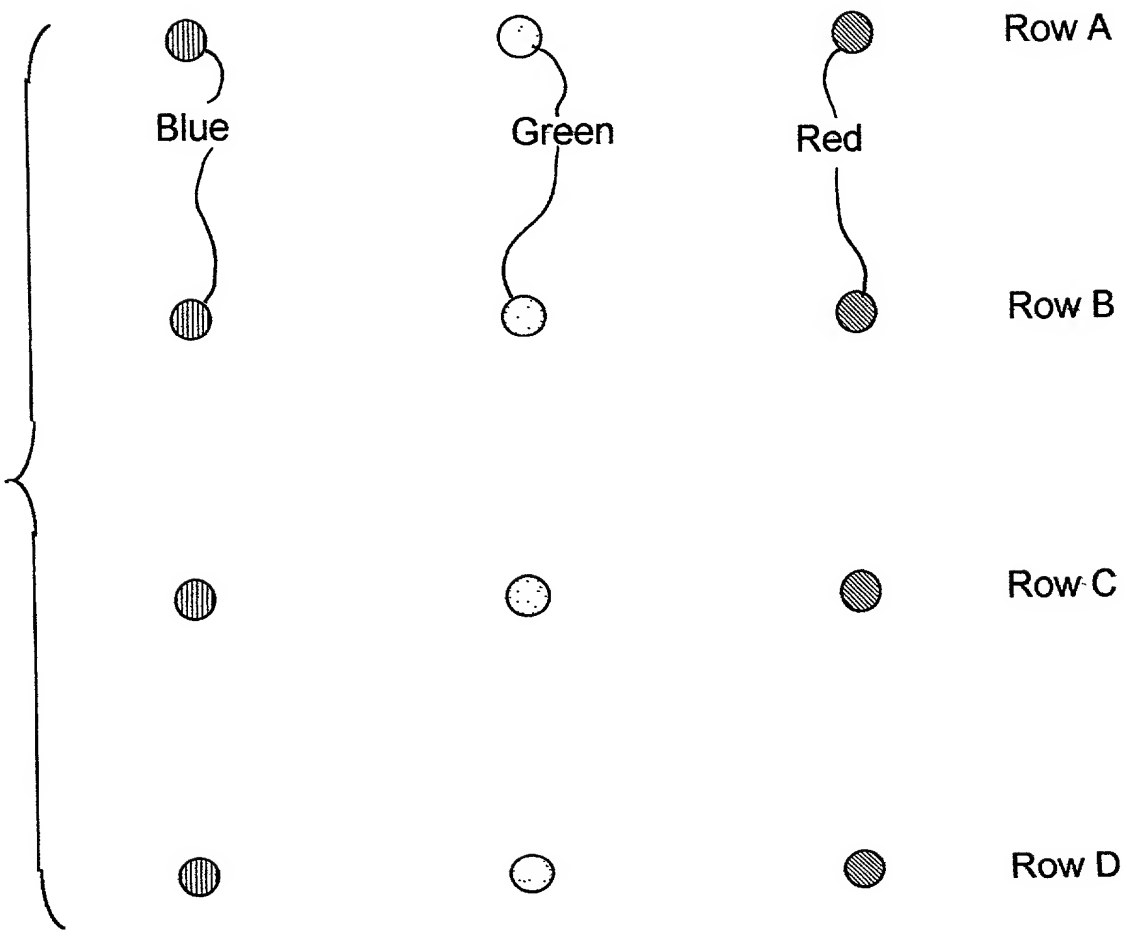
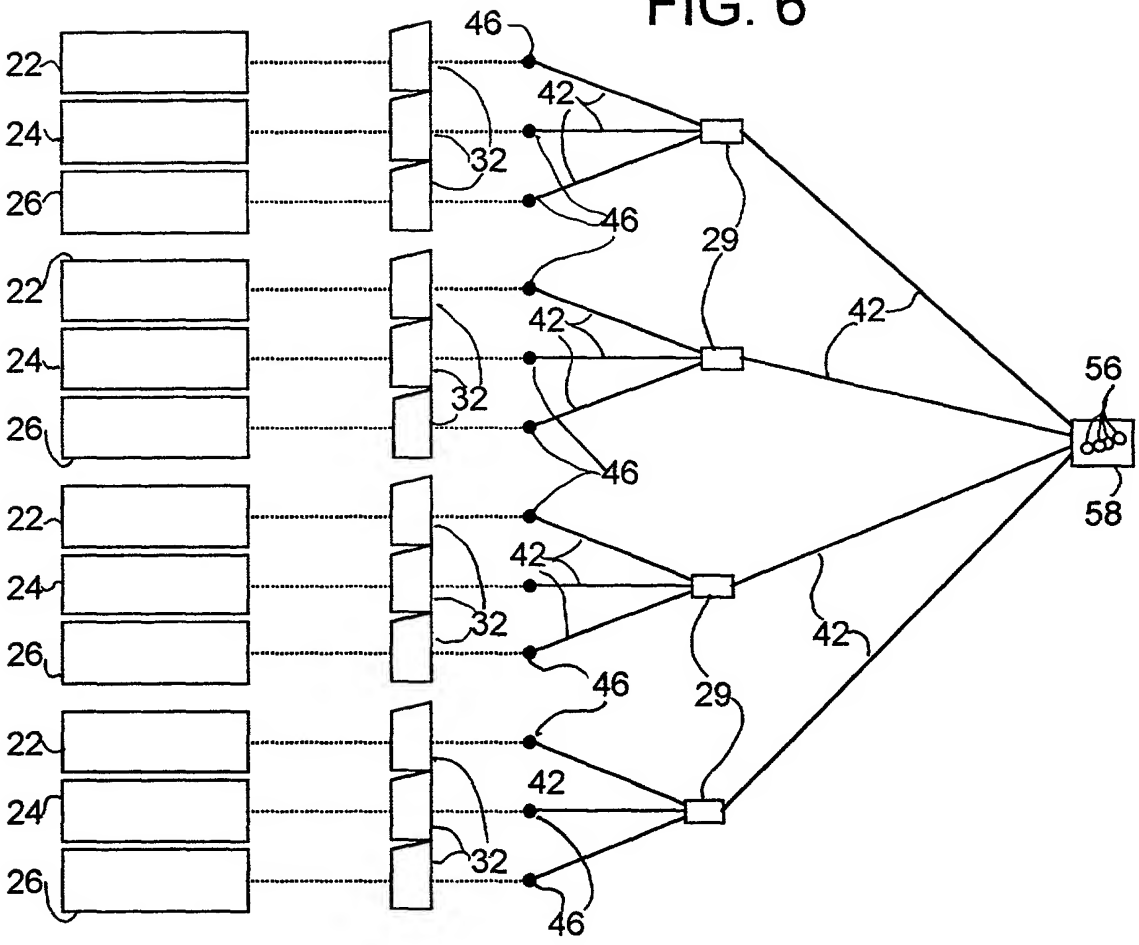

Blue
Green
Red
Row A
Row B
Row C
Row D

FIG. 5S

FIG. 6


22
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46

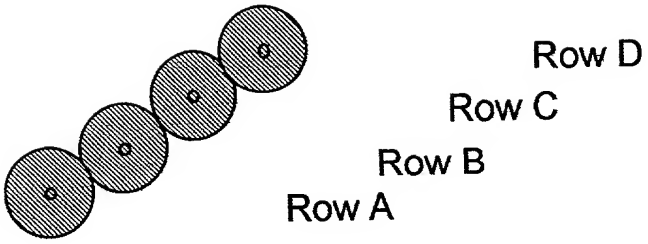


FIG. 7

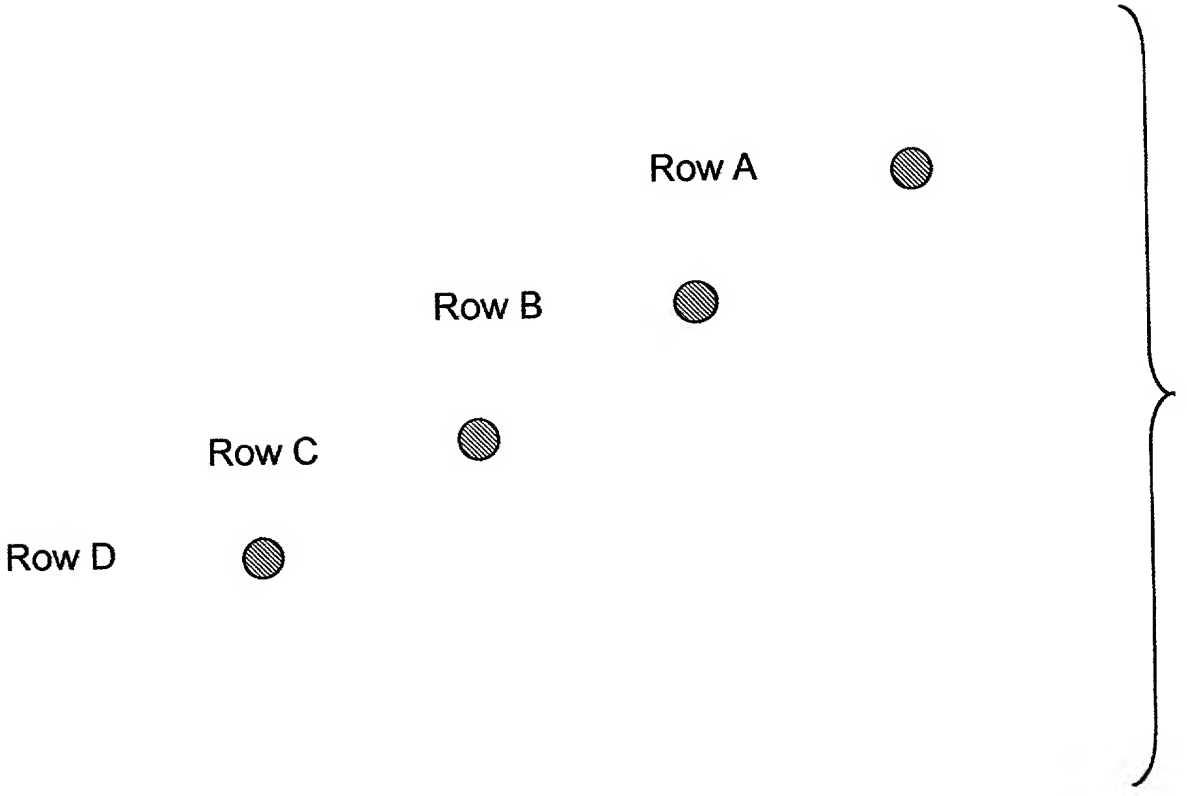


FIG. 7S

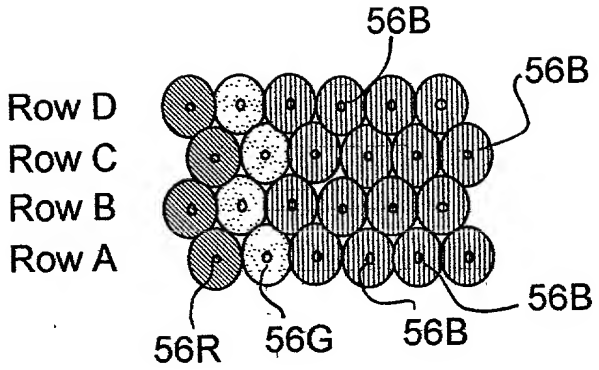

56B
56B
Row D
Row C
Row B
Row A
56B
56R
56G
56B

FIG. 8

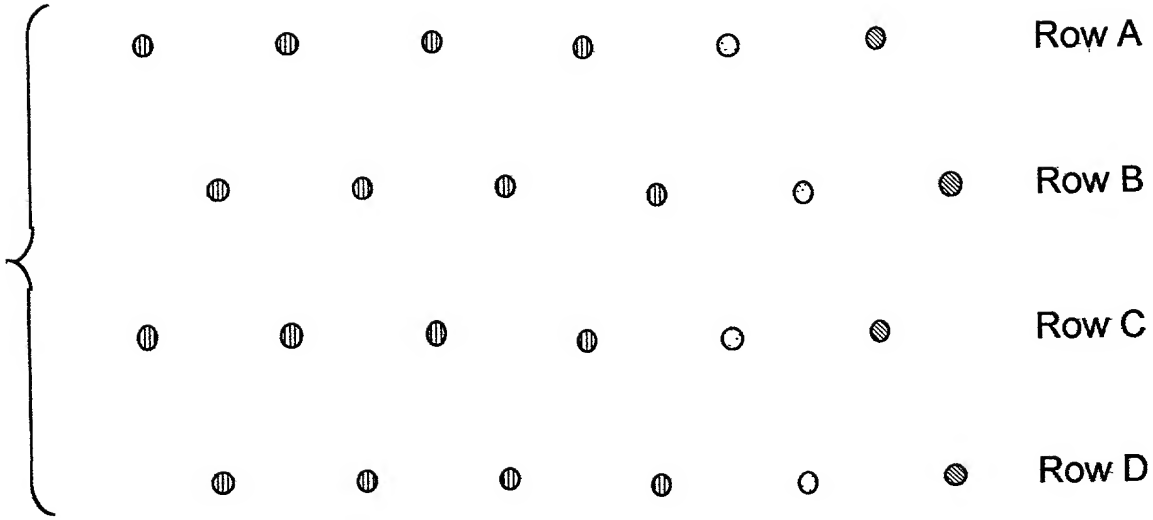

Row A
Row B
Row C
Row D

FIG. 8S

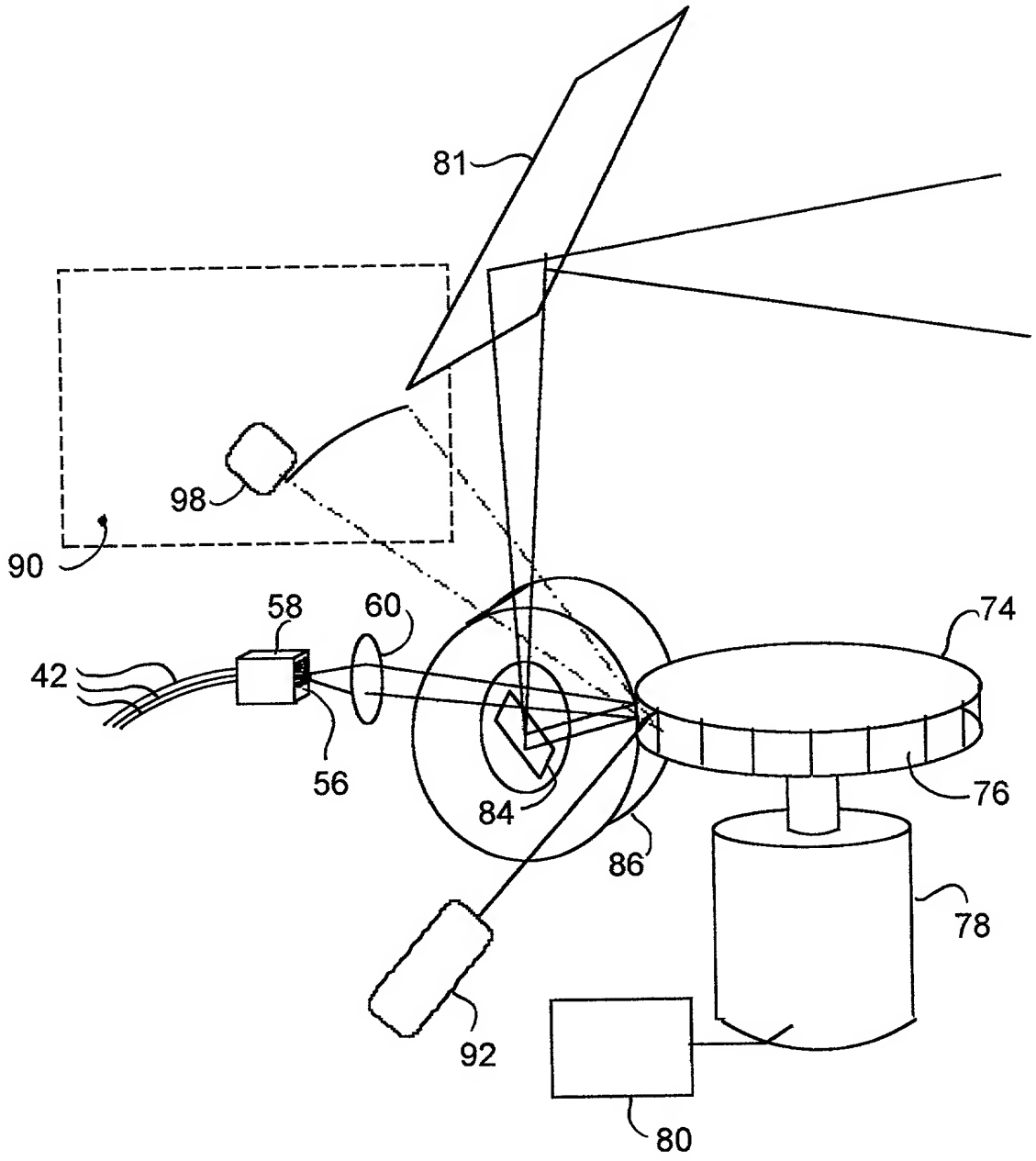


FIG. 9

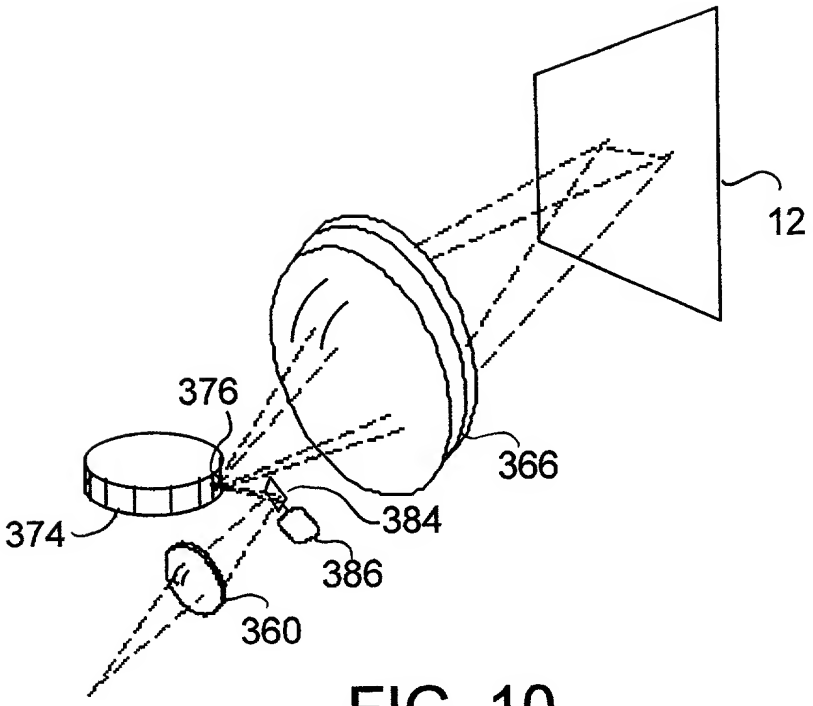


FIG. 10

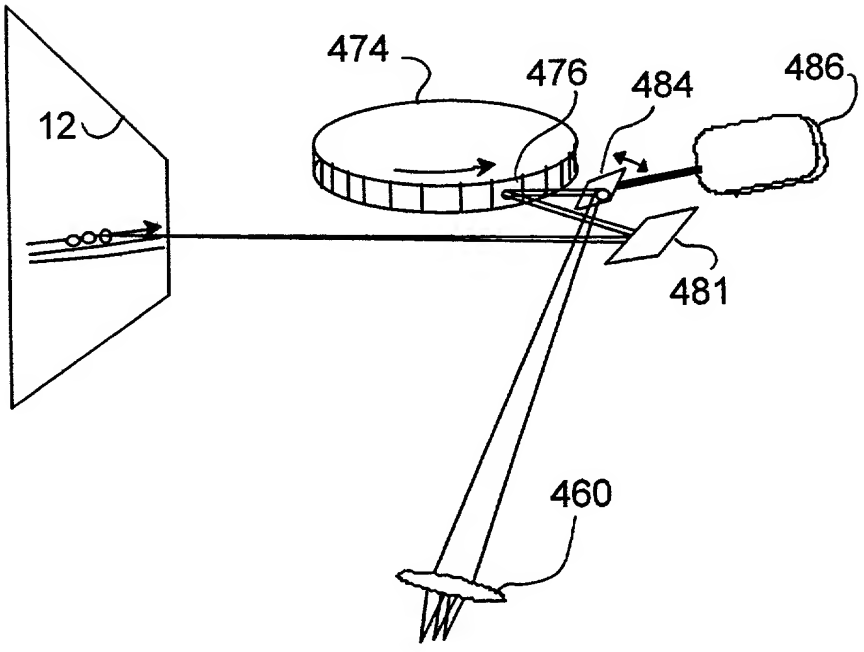


FIG. 11

PLEASE DO NOT COPY

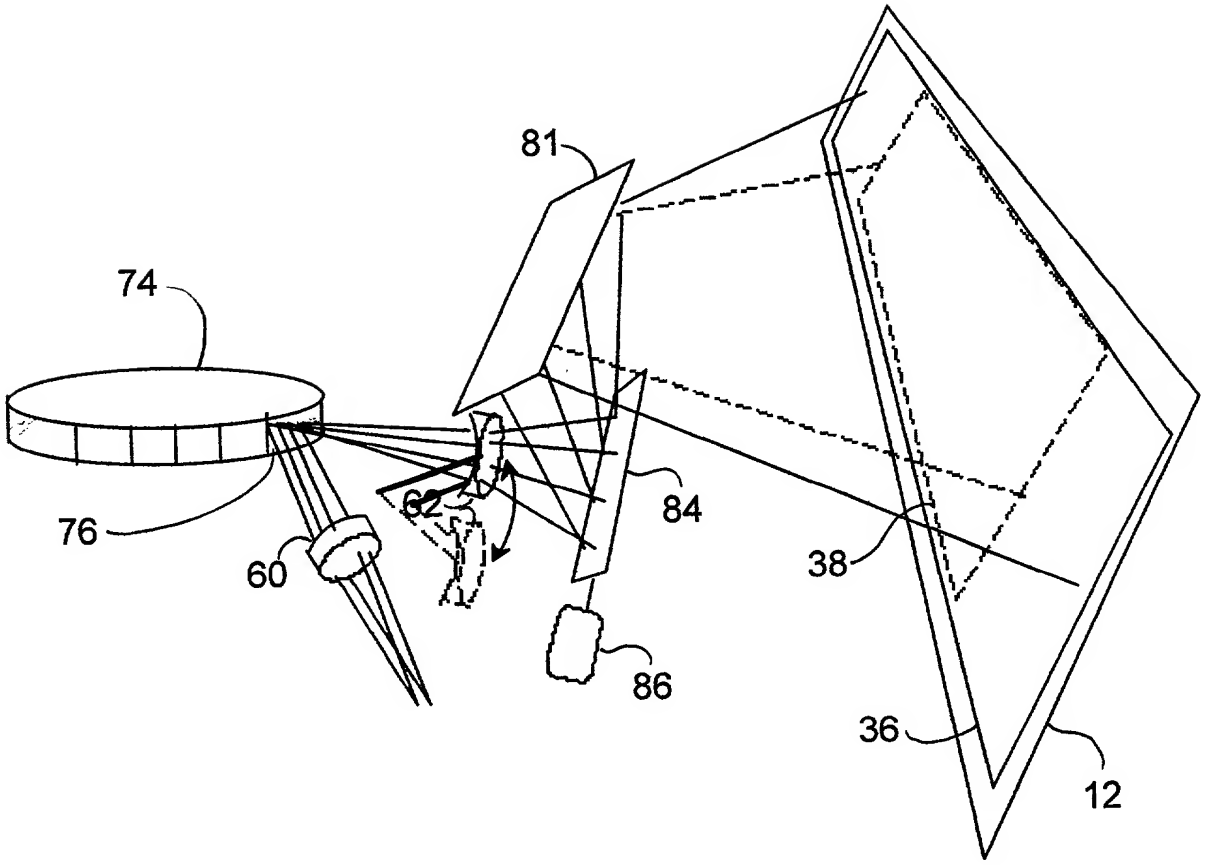


FIG. 12

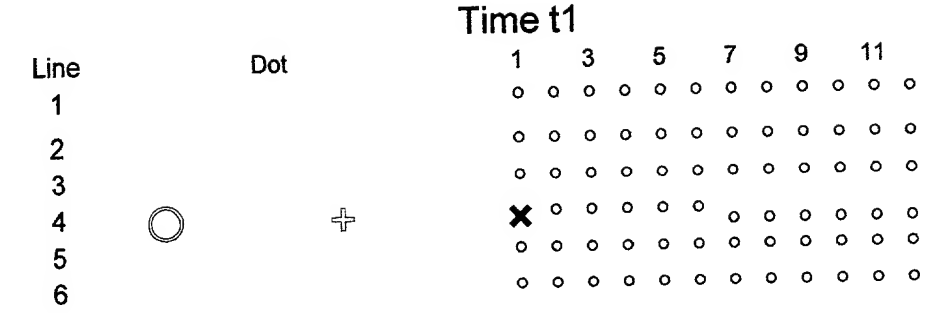


FIG. 13A

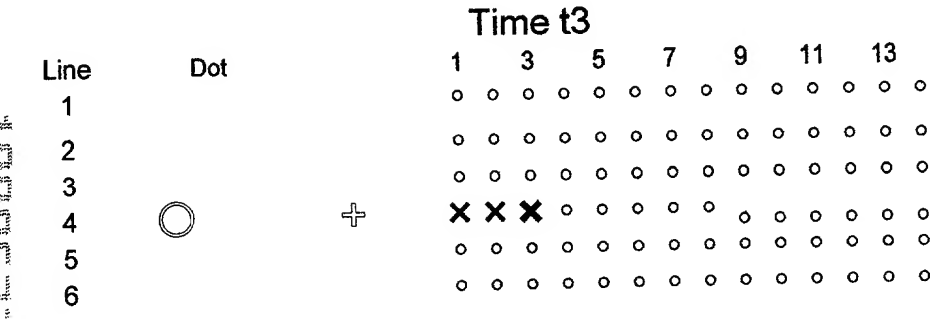


FIG. 13B

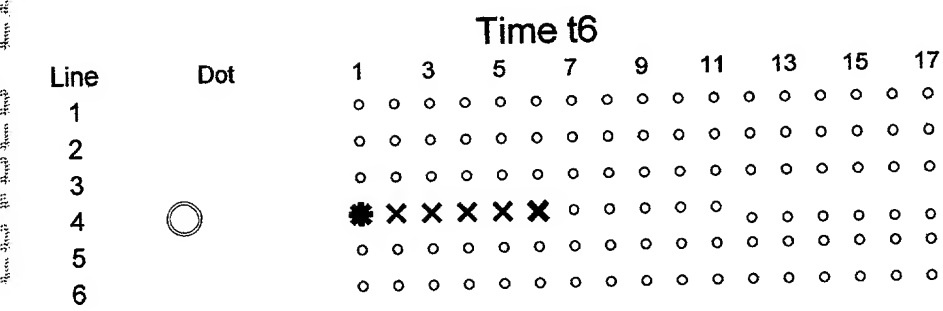


FIG. 13C

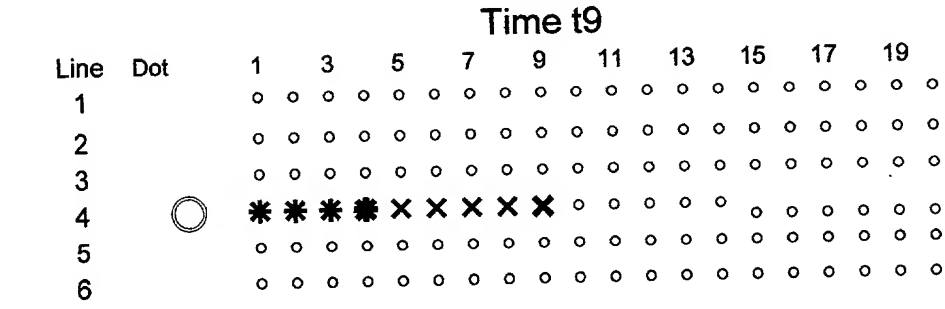


FIG. 13D

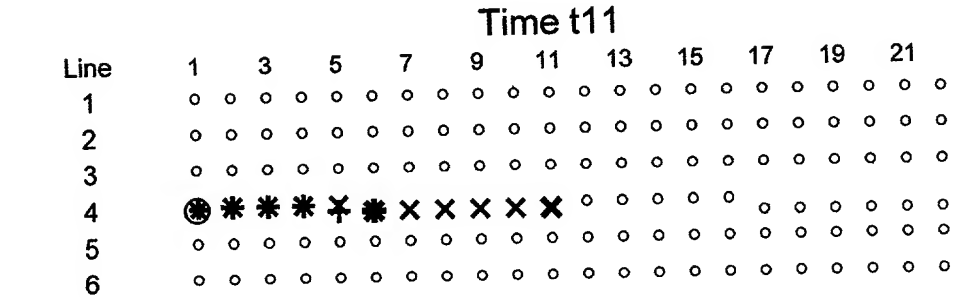


FIG. 13E

× red + green ○ blue ✱ red+green ❋ red+green+blue

Time t1920

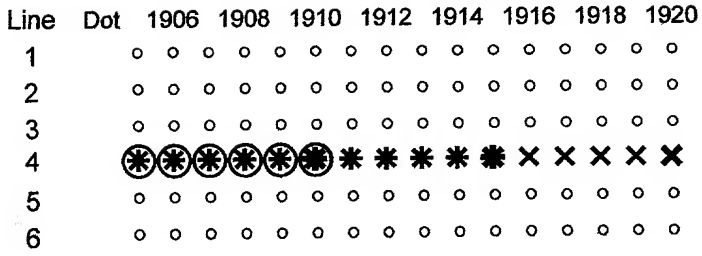


FIG. 13F

Time t1922

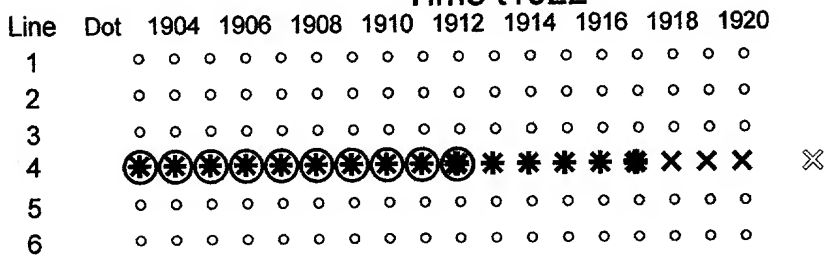


FIG. 13G

Time t1925

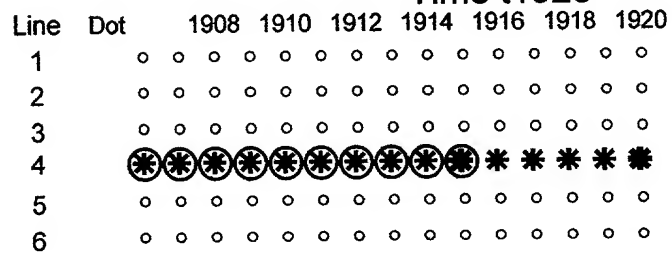


FIG. 13H

Time t1927

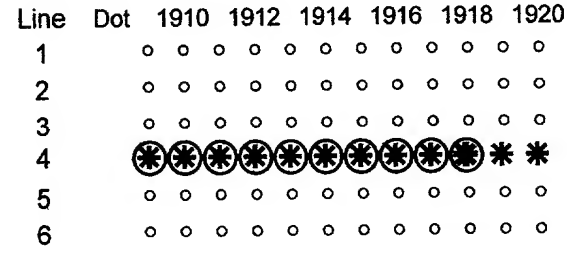


FIG.13I

Time t1930

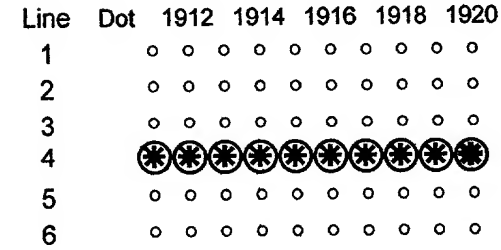


FIG.13J

× red + green ○ blue ✱ red+green ⊛ red+green+blue

Scan Pass

s1		s2		s3		s4		s5	
	AAA		AAA		AAA				
	BBB		BBB			Line		Line	
	CCC	Line		Line		2	**AAA** BBB	2	AAA BBB
Line		2	**CCC**	2	**BBB** CCC	4	CCC DDD	4	CCC DDD
2		4	DDD	4	DDD	6	**BBB** CCC	6	**AAA** BBB
4	**DDD**	6		6		8	DDD	8	CCC DDD
6		8	**DDD**	8	**CCC** DDD	10	**CCC**	10	**BBB** CCC
8		10		10		12	DDD	12	DDD
10		12		12	**DDD**	14		14	
12		14		14		16	**DDD**	16	**CCC** DDD
14		16		16		18		18	
		18		18		20		20	**DDD**
1080		1080		1080		22		22	
						1080		1080	

FIG.14A FIG.14B FIG.14C FIG.14D FIG.14E

Scan Pass

s269		s270		s271		s272		s273	
Line		Line		Line		Line		Line	
1060	DDD	1060	DDD	1064	DDD	1068	DDD	1072	DDD
1062	**AAA** BBB	1062	AAA BBB	1066	AAA BBB	1070	AAA BBB	1074	AAA BBB
1064	CCC DDD	1064	CCC DDD	1068	CCC DDD	1072	CCC DDD	1076	CCC DDD
1066	**BBB** CCC	1066	**AAA** BBB	1070	**AAA** BBB	1074	**AAA** BBB	1078	**AAA** BBB
1068	DDD	1068	CCC DDD	1072	CCC DDD	1076	CCC DDD	1080	CCC DDD
1070		1070	**BBB** CCC	1074	**BBB** CCC	1078	**BBB** CCC		BBB
1072	**CCC** DDD	1072	DDD	1076	DDD	1080	DDD		
1074		1074		1078			CCC		CCC
1076	**DDD**	1076	**CCC** DDD	1080	**CCC** DDD				
1078		1078			DDD		DDD		DDD
1080		1080	**DDD**						

FIG.15A FIG.15B FIG.15C FIG.15D FIG.15E

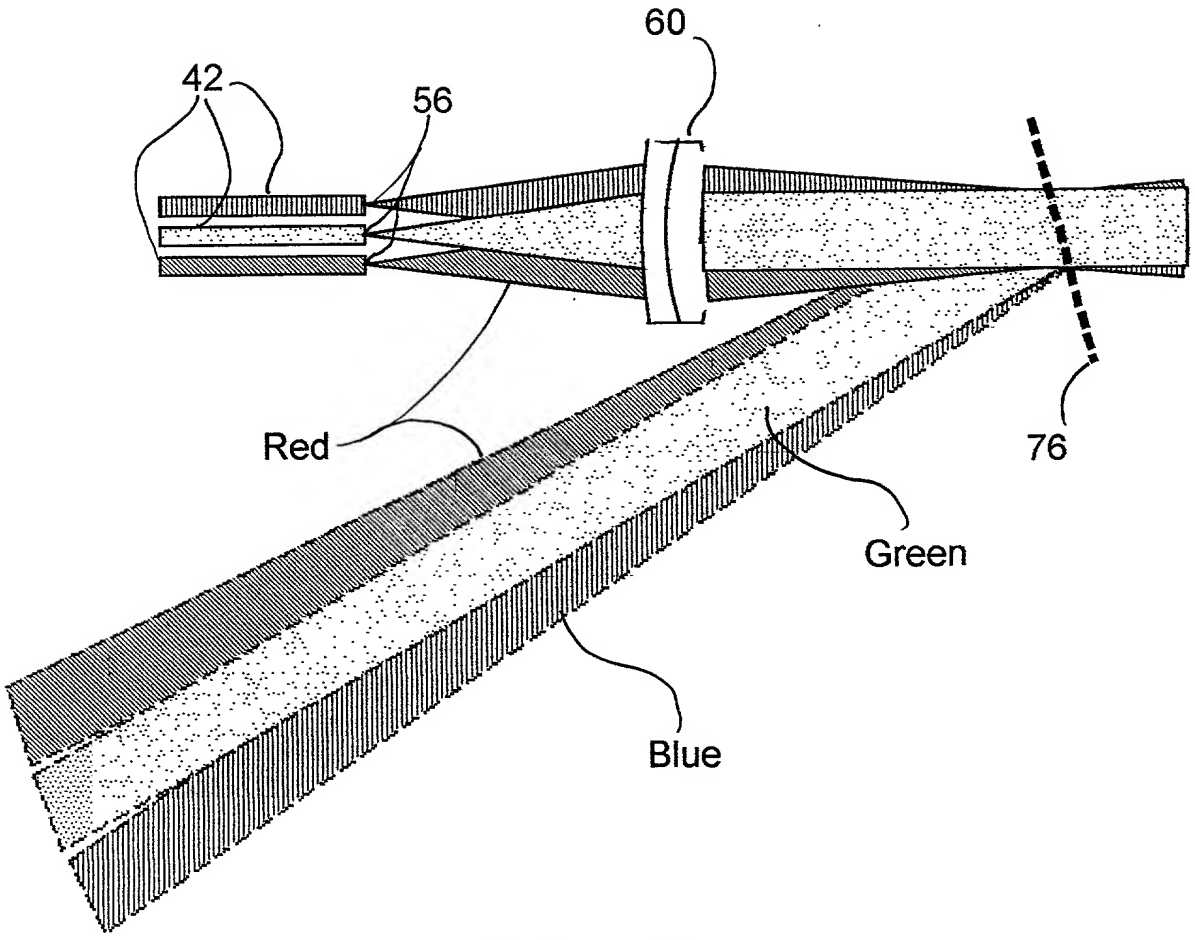


FIG. 16

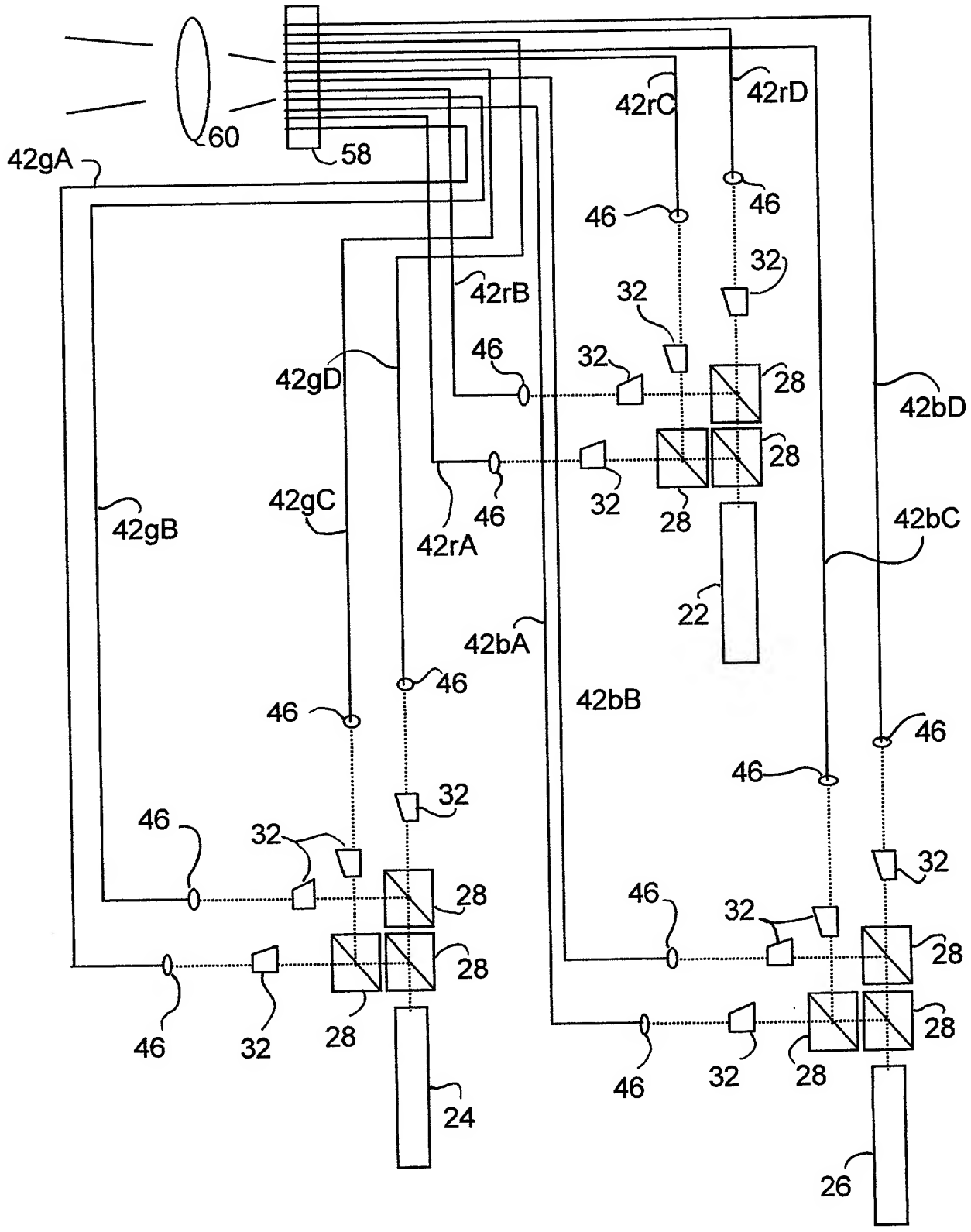

60
58
42gA
42rC
42rD
46
46
32
32
42rB
46
32
28
42gD
42bD
28
42gC
42gB
46
32
28
42rA
42bC
22
42bA
42bB
46
46
46
46
32
32
46
28
46
32
28
28
46
32
28
28
46
32
28
24
26

FIG. 17

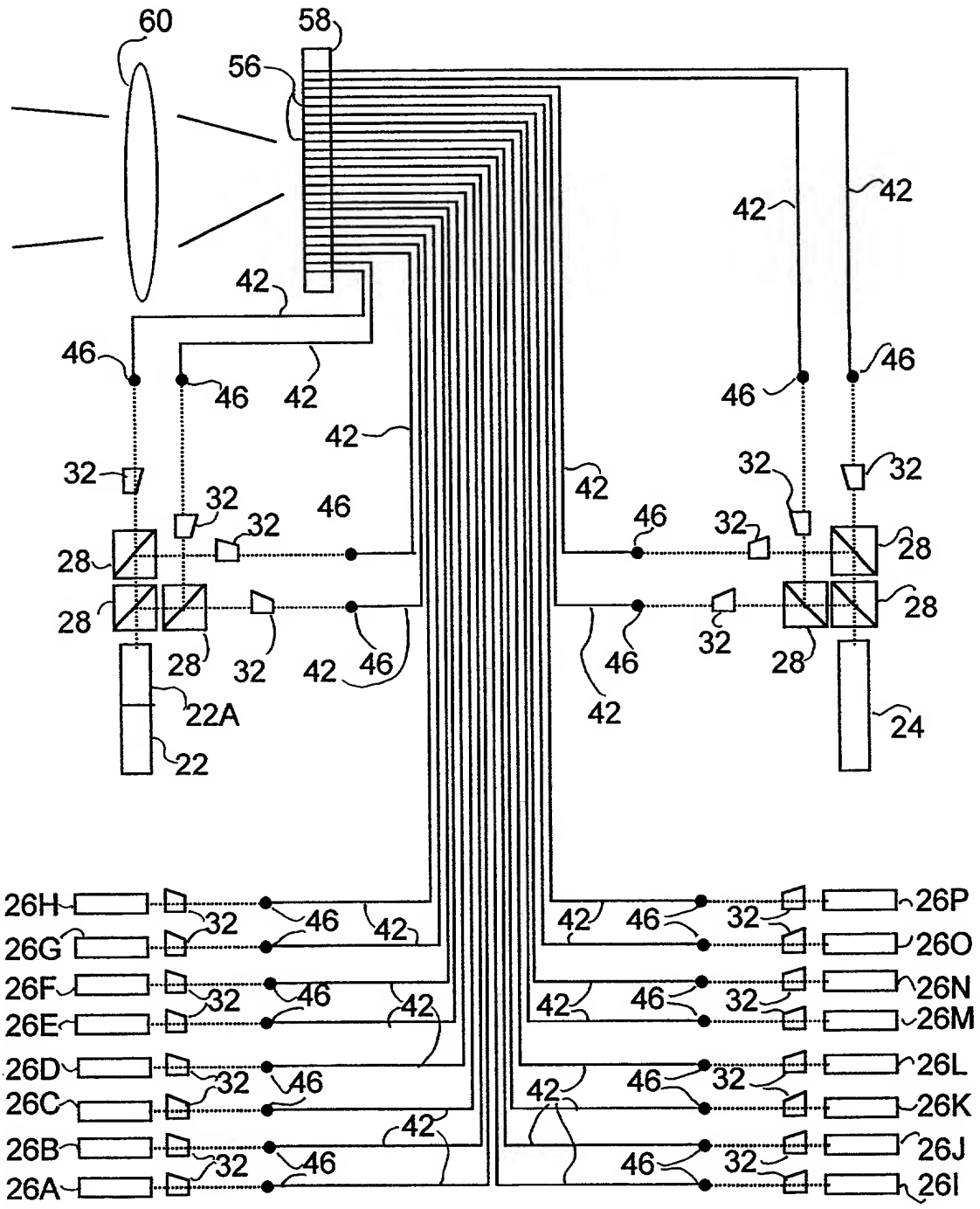
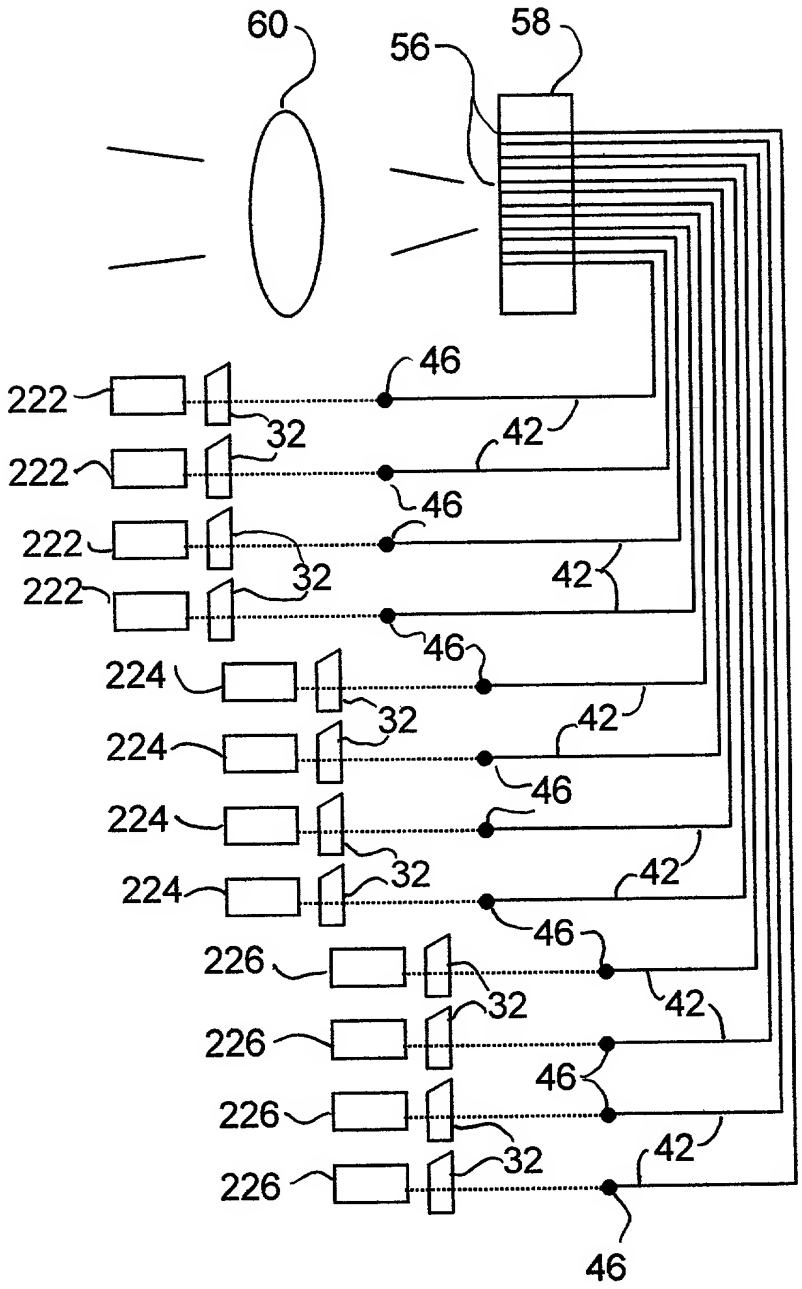

60
58
56
42
46
32
28
22A
22
24
26H
26G
26F
26E
26D
26C
26B
26A
26P
26O
26N
26M
26L
26K
26J
26I

FIG. 18


60
56
58
222
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222
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222
32
42
222
46
224
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224
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226
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226
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42
226
32
46

FIG. 19

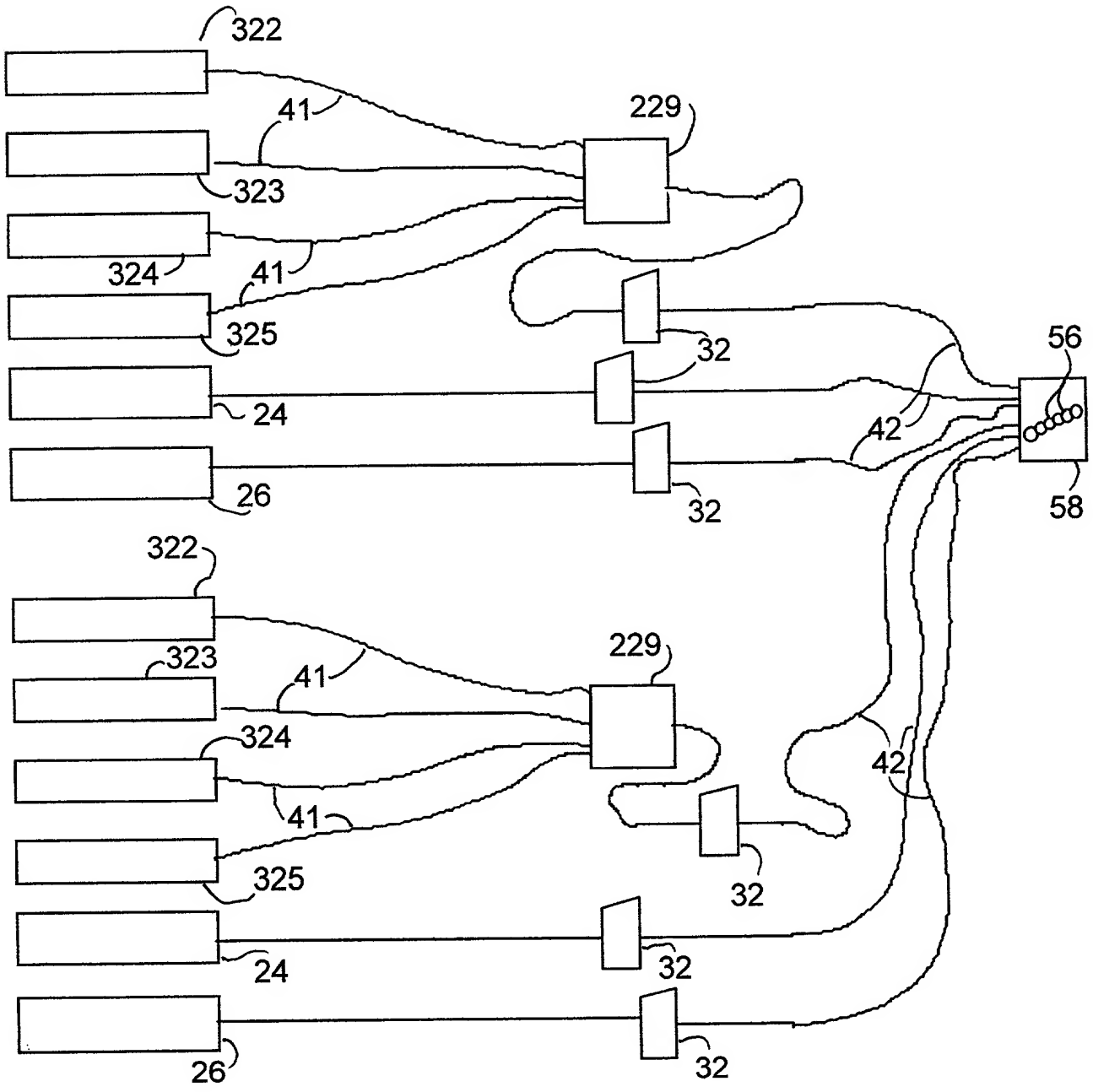

322
41
229
323
324
41
325
32
56
24
42
26
32
58
322
323
41
229
324
41
42
325
32
24
32
26
32

FIG. 20

Adobe Scanned

FIG. 21

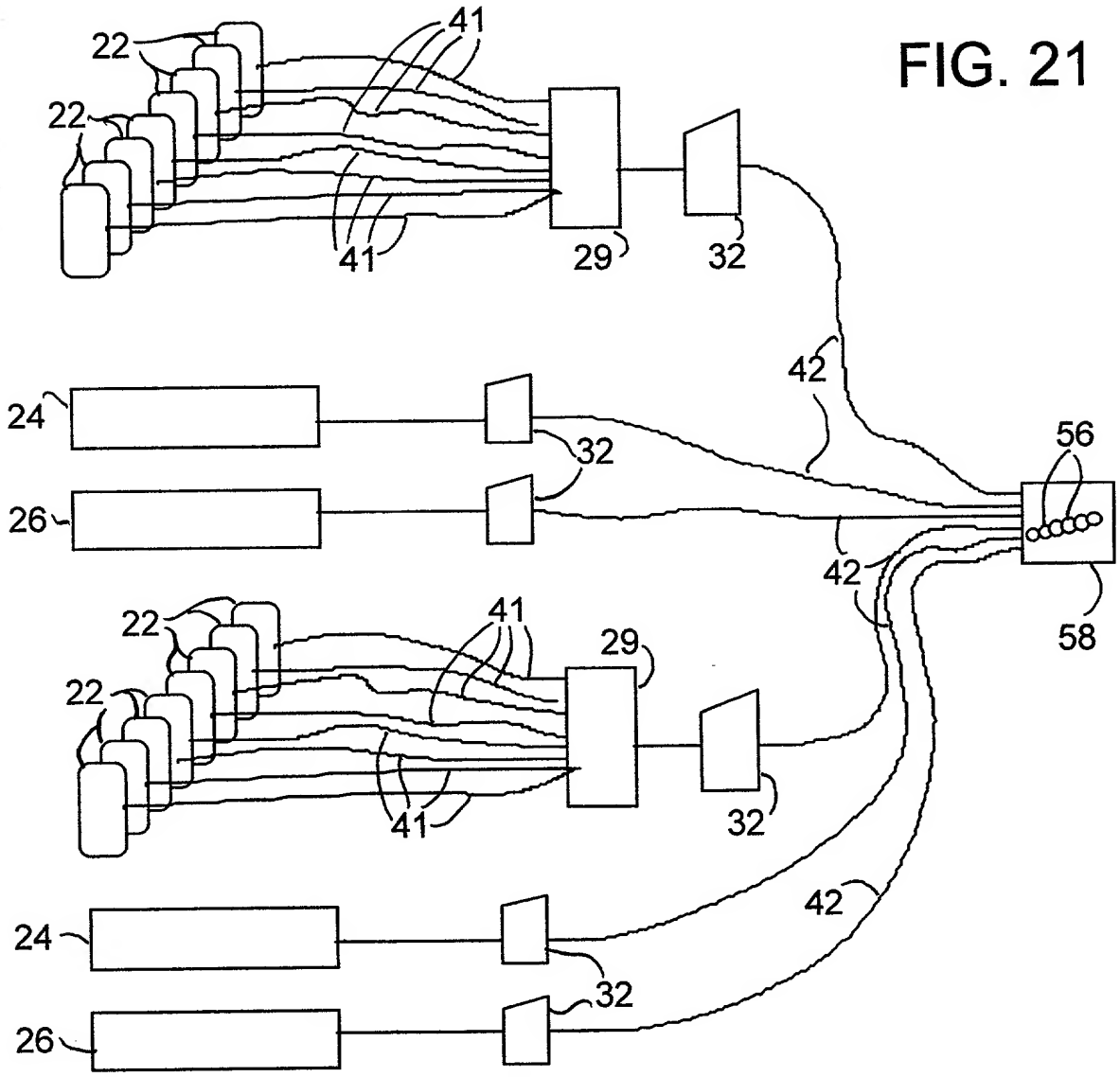


FIG. 22

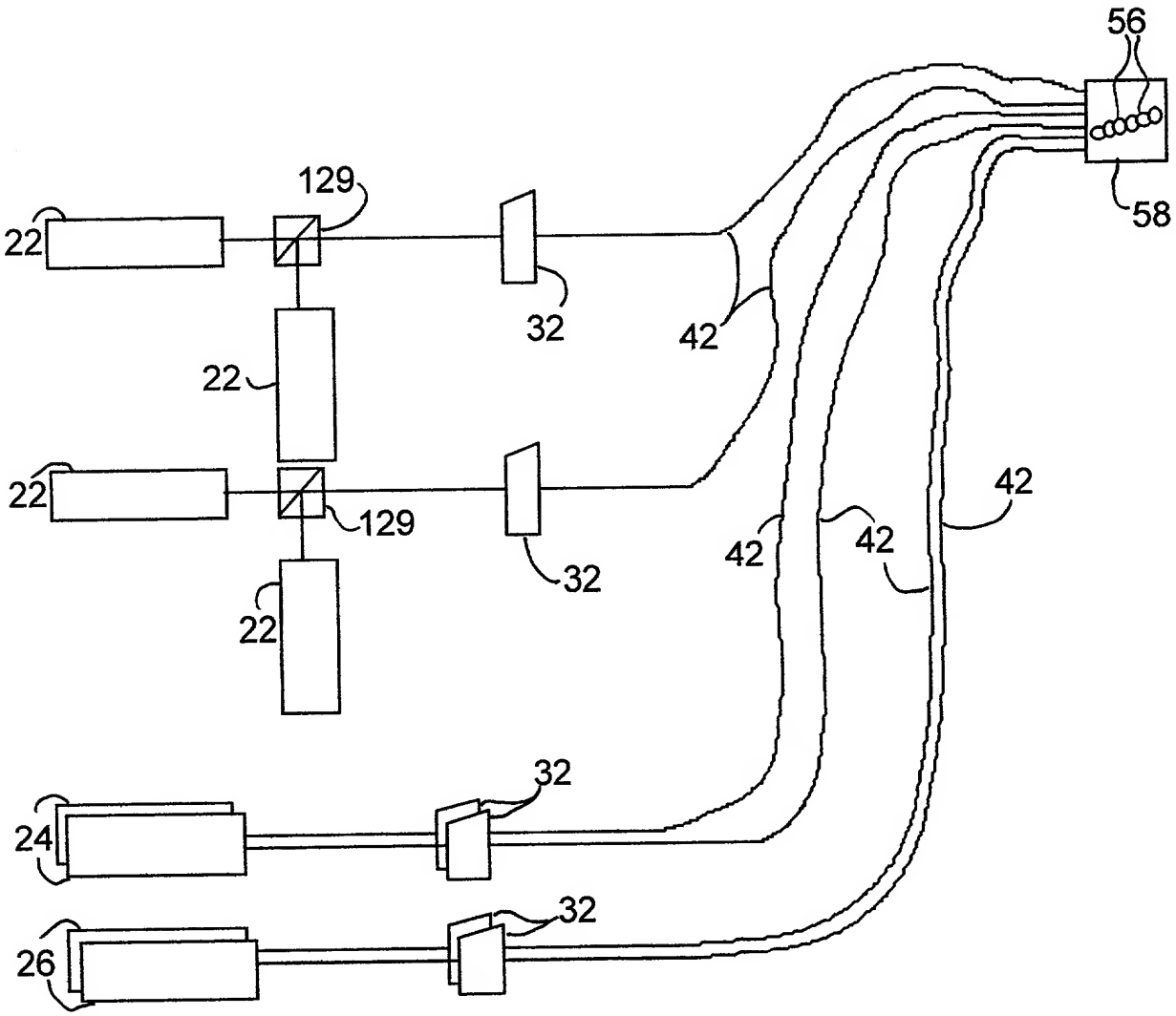
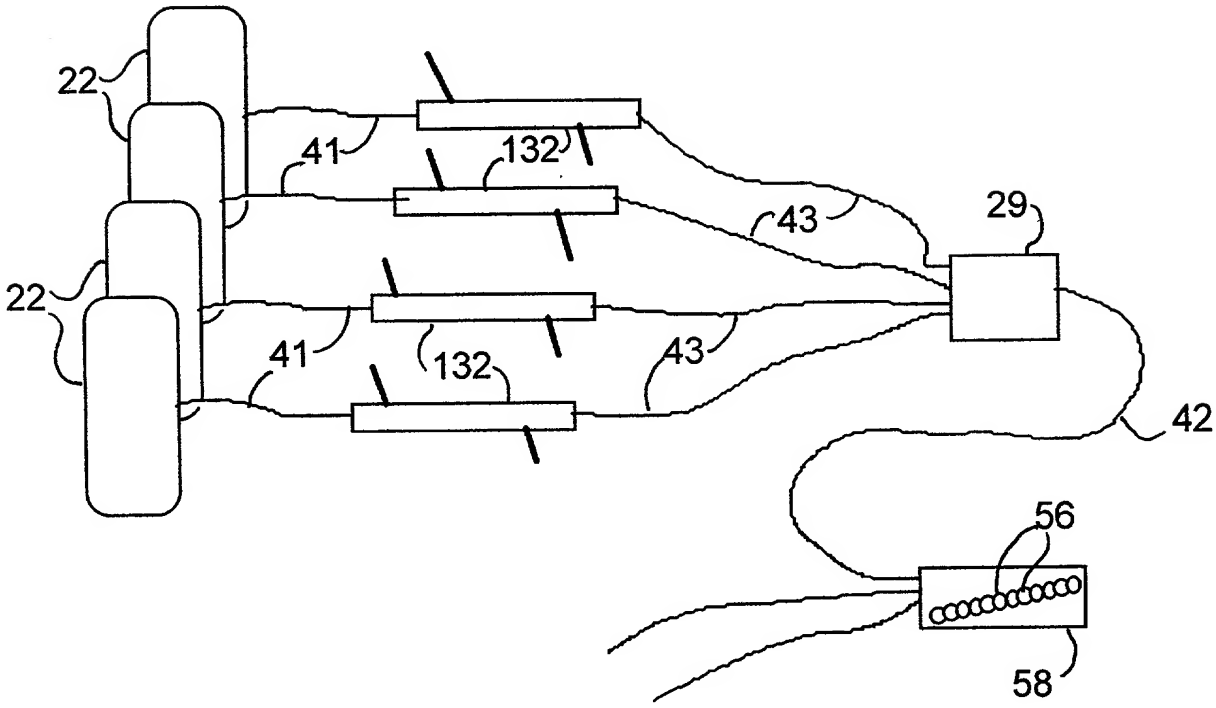


FIG. 23



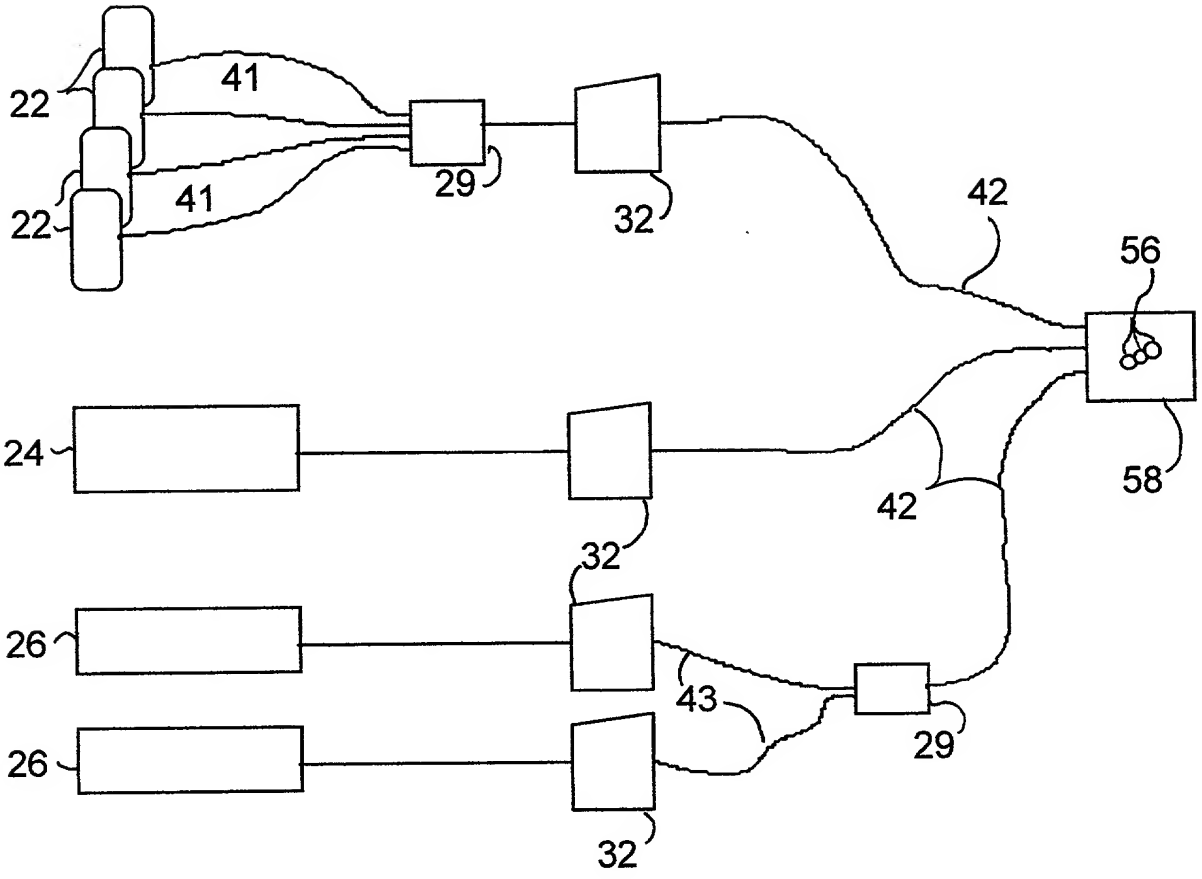
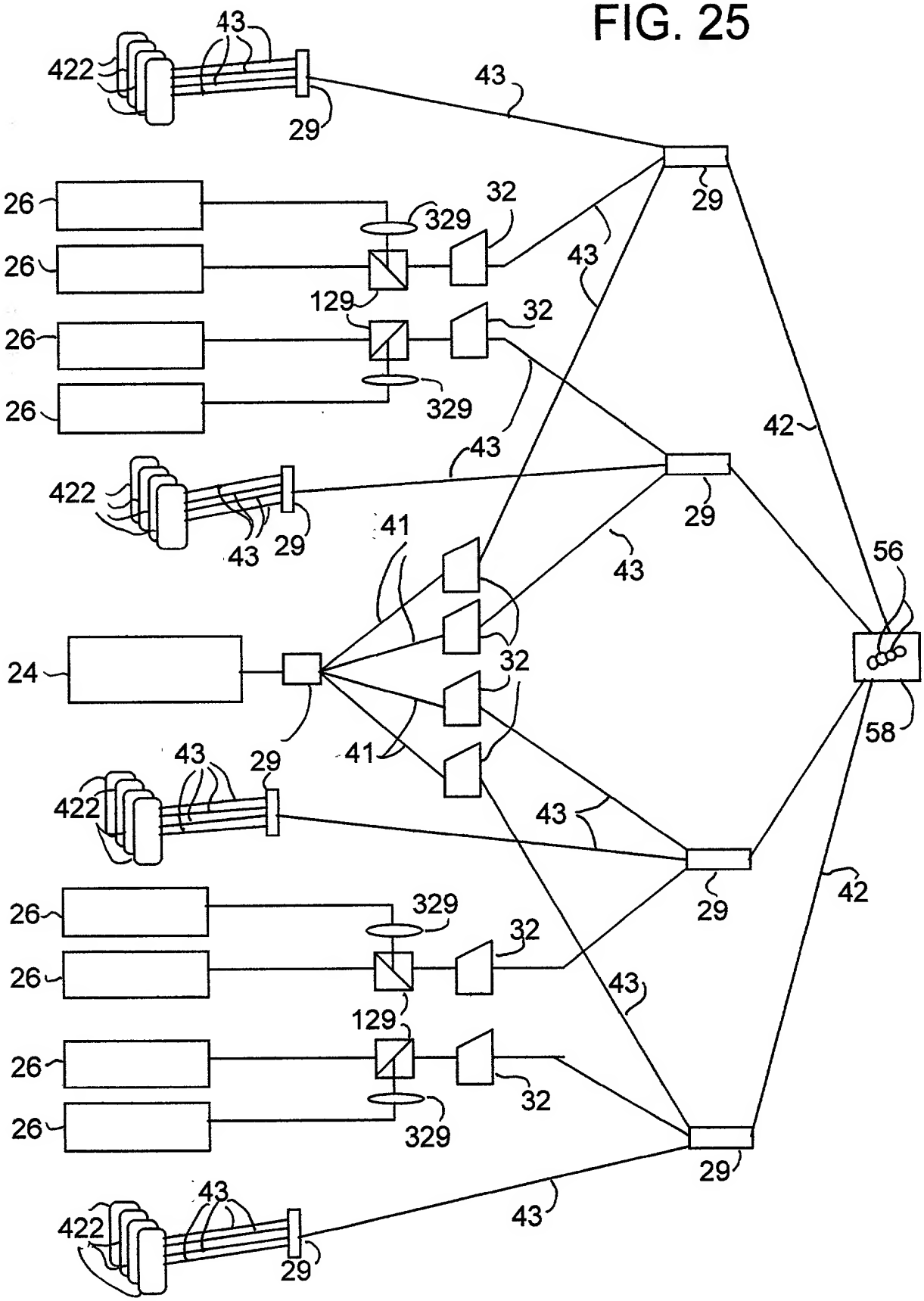


FIG. 24

FIG. 25


43
422
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43
26
329
32
26
43
129
26
32
26
329
42
43
422
29
43
29
41
56
24
32
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422
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26
129
26
32
26
329
43
422
43
29

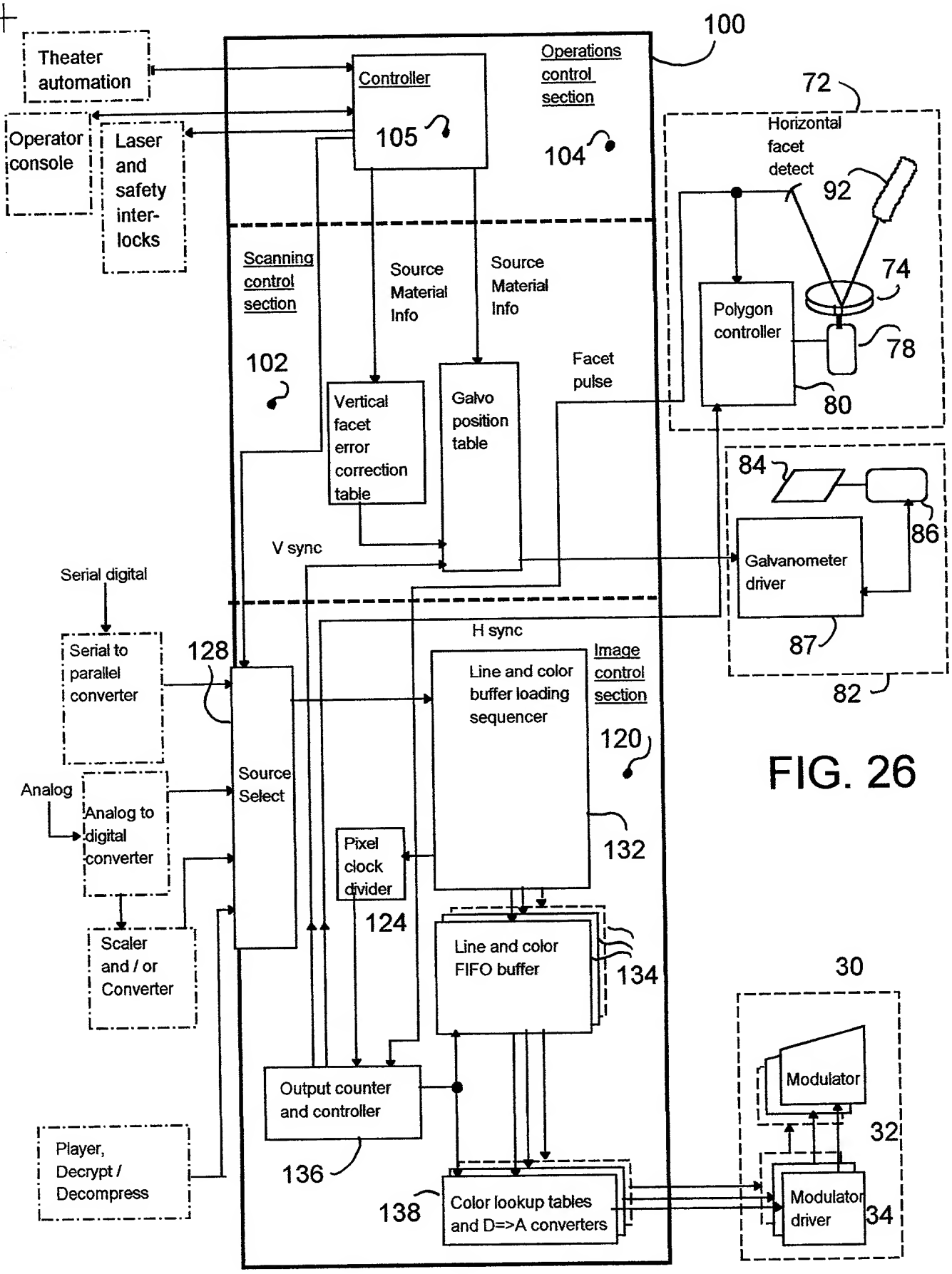

100
Theater automation
Operator console
Laser and safety inter-locks
Controller
105
Operations control section
104
72
Horizontal facet detect
92
74
Polygon controller
78
80
Scanning control section
102
Source Material Info
Source Material Info
Facet pulse
Vertical facet error correction table
Galvo position table
84
86
Galvanometer driver
87
82
V sync
H sync
Serial digital
Serial to parallel converter
128
Source Select
Line and color buffer loading sequencer
Image control section
120
132
Analog
Analog to digital converter
Pixel clock divider
124
Scaler and / or Converter
Line and color FIFO buffer
134
30
Modulator
32
Output counter and controller
136
Player, Decrypt / Decompress
138
Color lookup tables and D=>A converters
Modulator driver
34

FIG. 26

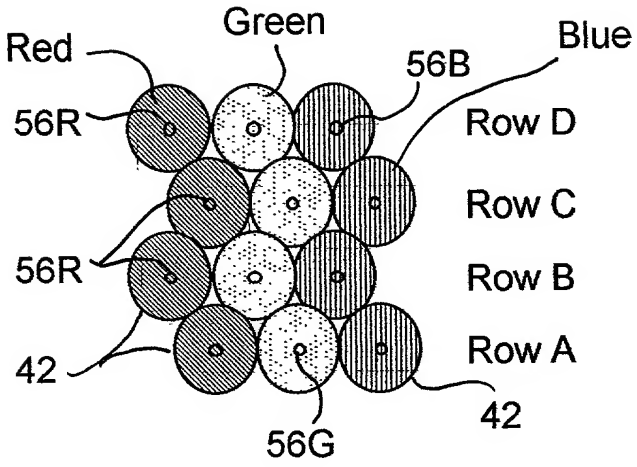


FIG. 27

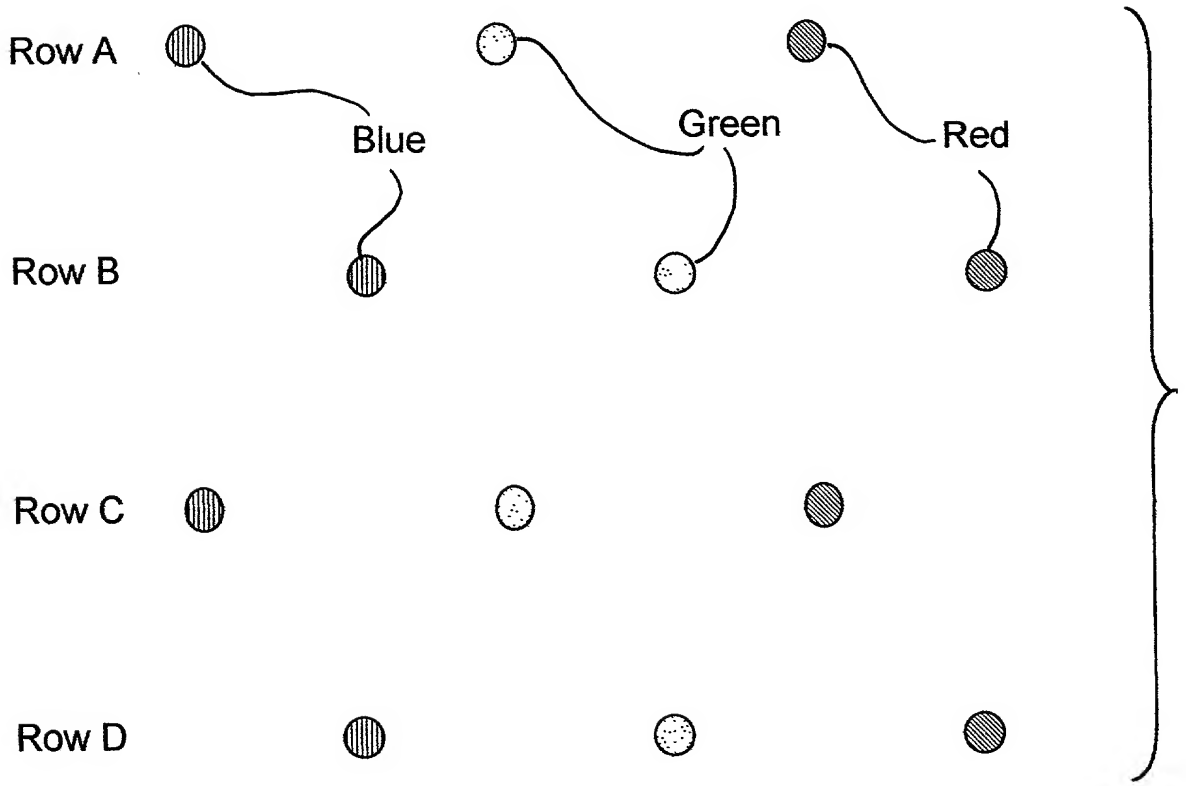
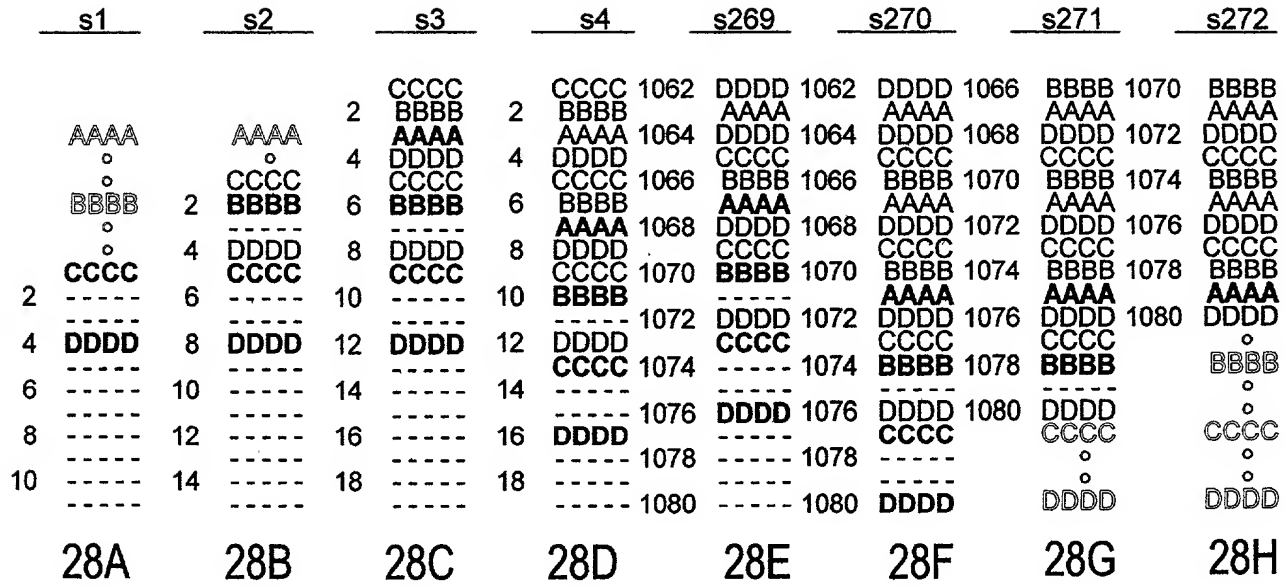
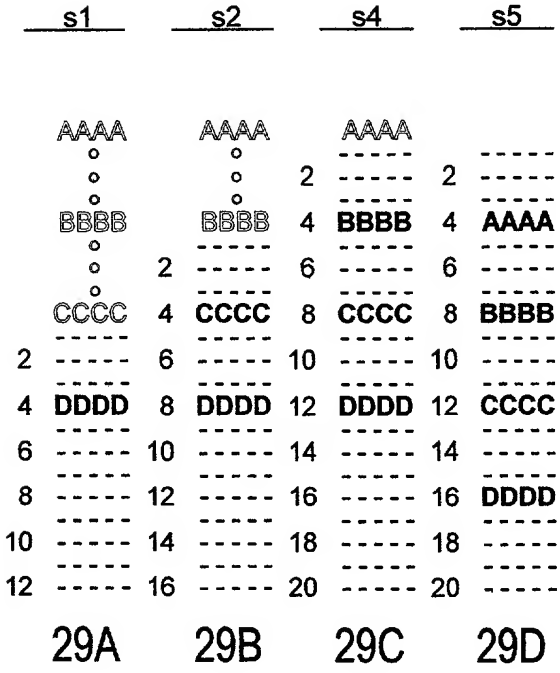


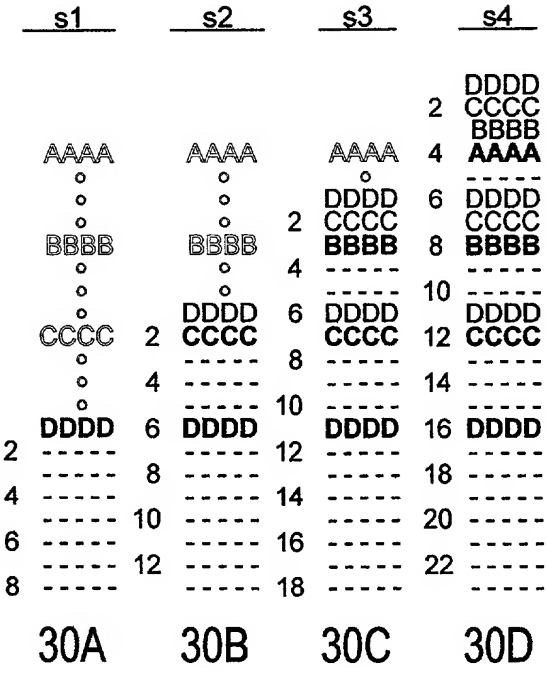
FIG. 27S



FIGs. 28A-28H



FIGs. 29A-29D



FIGs. 30A-30D

Scan Pass s3 Time t1

Line	Dot	1	3	5
1		∘ ∘ ∘ ∘ ∘		
2		∘ ∘ ∘ ∘ ∘		
3	Ba Ga Ra	∘ ∘ ∘ ∘ ∘		
4		∘ ∘ ∘ ∘ ∘		
5		∘ ∘ ∘ ∘ ∘		
6	Bb Gb	**Rb** ∘ ∘ ∘ ∘		
7		∘ ∘ ∘ ∘ ∘		
8		∘ ∘ ∘ ∘ ∘		
9	Bc Gc Rc	∘ ∘ ∘ ∘ ∘		
10		∘ ∘ ∘ ∘ ∘		
11		∘ ∘ ∘ ∘ ∘		
12	Bd Gd	**Rd** ∘ ∘ ∘ ∘		
13		∘ ∘ ∘ ∘ ∘		

FIG. 31A

Scan Pass s3 Time t3

Line	Dot	1	3	5	7
1		∘ ∘ ∘ ∘ ∘ ∘ ∘			
2		∘ ∘ ∘ ∘ ∘ ∘ ∘			
3	Ba Ga	**Ra** ∘ ∘ ∘ ∘ ∘ ∘			
4		∘ ∘ ∘ ∘ ∘ ∘ ∘			
5		∘ ∘ ∘ ∘ ∘ ∘ ∘			
6	Bb Gb	Rb Rb **Rb** ∘ ∘ ∘ ∘			
7		∘ ∘ ∘ ∘ ∘ ∘ ∘			
8		∘ ∘ ∘ ∘ ∘ ∘ ∘			
9	Bc Gc	**Rc** ∘ ∘ ∘ ∘ ∘ ∘			
10		∘ ∘ ∘ ∘ ∘ ∘ ∘			
11		∘ ∘ ∘ ∘ ∘ ∘ ∘			
12	Bd Gd	Rd Rd **Rd** ∘ ∘ ∘ ∘			
13		∘ ∘ ∘ ∘ ∘ ∘ ∘			

FIG. 31B

Scan Pass s3 Time t5

Line	Dot	1	3	5	7	9
1		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
2		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
3	Ba Ga	Ra Ra **Ra** ∘ ∘ ∘ ∘ ∘				
4		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
5		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
6	Bb	GR Rb Rb Rb **Rb** ∘ ∘ ∘ ∘				
7		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
8		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
9	Bc Gc	Rc Rc **Rc** ∘ ∘ ∘ ∘ ∘				
10		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
11		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				
12	Bd	GR Rd Rd Rd **Rd** ∘ ∘ ∘ ∘				
13		∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘				

FIG. 31C

Scan Pass s3 Time t11

Line	1	3	5	7	9	11	13	15
1	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
2	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
3	**B-R** GR GR GR **GR** Ra Ra Ra **Ra** ∘ ∘ ∘ ∘ ∘ ∘ ∘							
4	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
5	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
6	B-R B-R **B-R** GR GR GR **GR** Rb Rb Rb **Rb** ∘ ∘ ∘ ∘							
7	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
8	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
9	**B-R** GR GR GR **GR** Rc Rc Rc **Rc** ∘ ∘ ∘ ∘ ∘ ∘ ∘							
10	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
11	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							
12	B-R B-R **B-R** GR GR GR **GR** Rd Rd Rd **Rd** ∘ ∘ ∘ ∘							
13	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘							

FIG. 31D

Scan Pass s3 Time t1920

Line	1908	1910	1912	1914	1916	1918	1920
1	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
2	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
3	B-R B-R **B-R** GR GR GR **GR** Ra Ra Ra **Ra** ∘ ∘						
4	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
5	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
6	B-R B-R B-R B-R **B-R** GR GR GR **GR** Rb Rb Rb **Rb**						
7	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
8	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
9	B-R B-R **B-R** GR GR GR **GR** Rc Rc Rc **Rc** ∘ ∘						
10	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
11	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						
12	B-R B-R B-R B-R **B-R** GR GR GR **GR** Rd Rd Rd **Rd**						
13	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘						

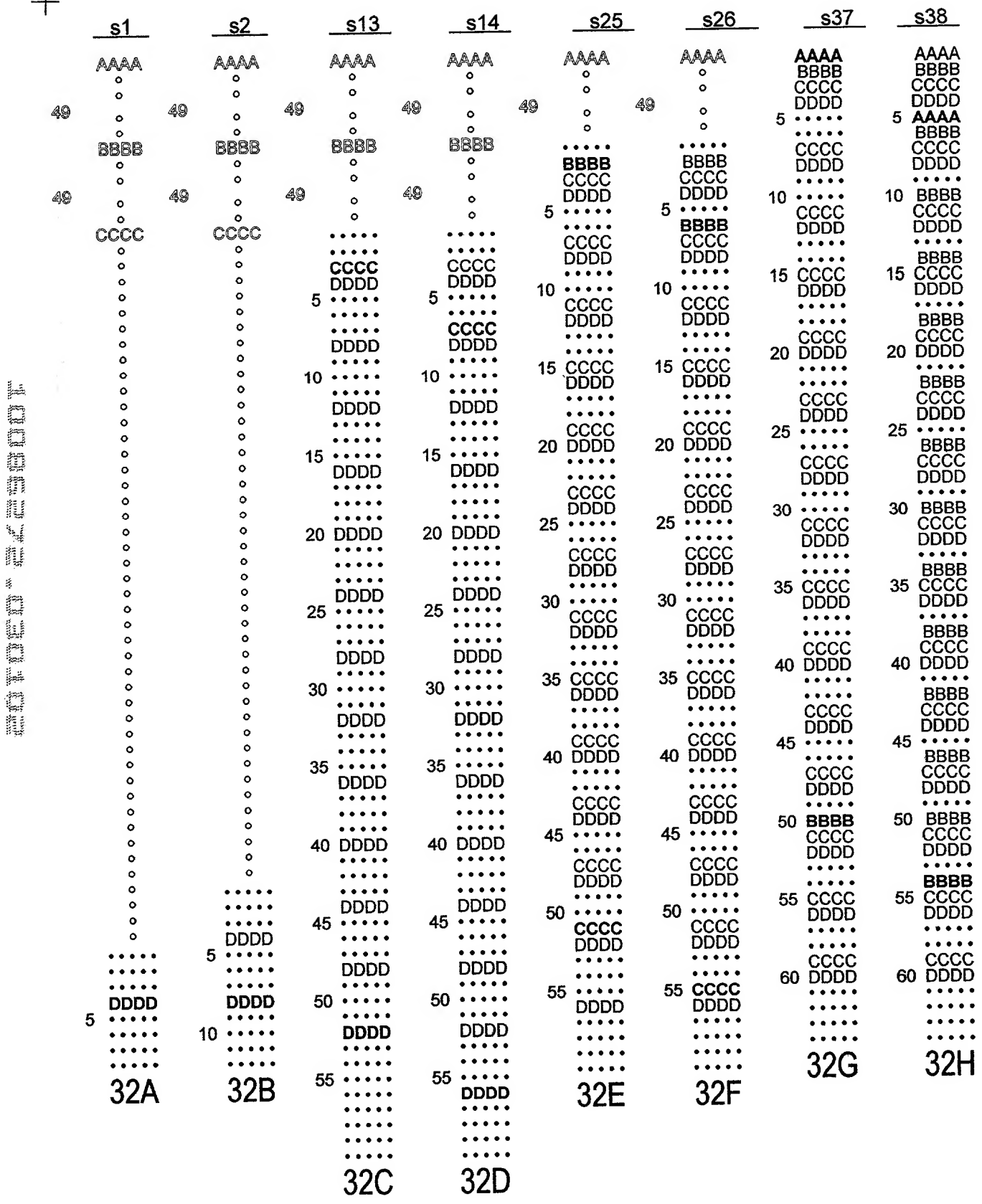
FIG. 31E

Scan Pass s3 Time t1930

Line	1918	1920
1	∘ ∘ ∘ ∘	
2	∘ ∘ ∘ ∘	
3	B-R B-R B-R **B-R** Ga Ra	
4	∘ ∘ ∘ ∘	
5	∘ ∘ ∘ ∘	
6	B-R B-R B-R B-R Bb Gb Rb	
7	∘ ∘ ∘ ∘	
8	∘ ∘ ∘ ∘	
9	B-R B-R B-R **B-R** Gc Rc	
10	∘ ∘ ∘ ∘	
11	∘ ∘ ∘ ∘	
12	B-R B-R B-R B-R Bd Gd Rd	
13	∘ ∘ ∘ ∘	

FIG. 31F

Embodiment


s1
s2
s13
s14
s25
s26
s37
s38
AAAA
BBBB
CCCC
DDDD
49
5
10
15
20
25
30
35
40
45
50
55
60
32A
32B
32C
32D
32E
32F
32G
32H

FIGs. 32A-32H

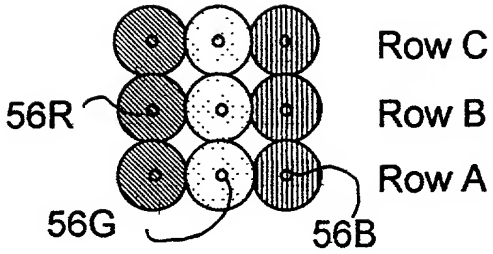


FIG. 33

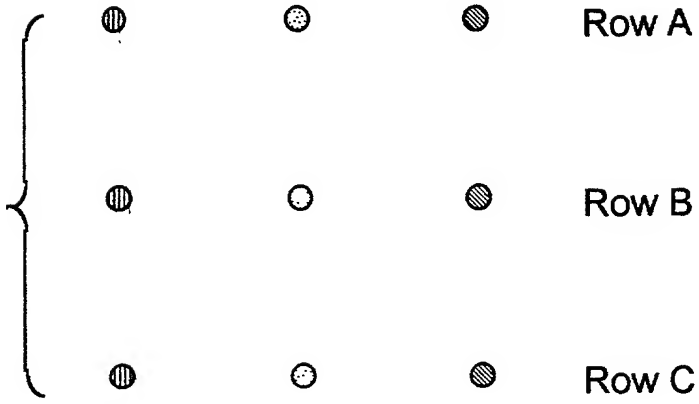
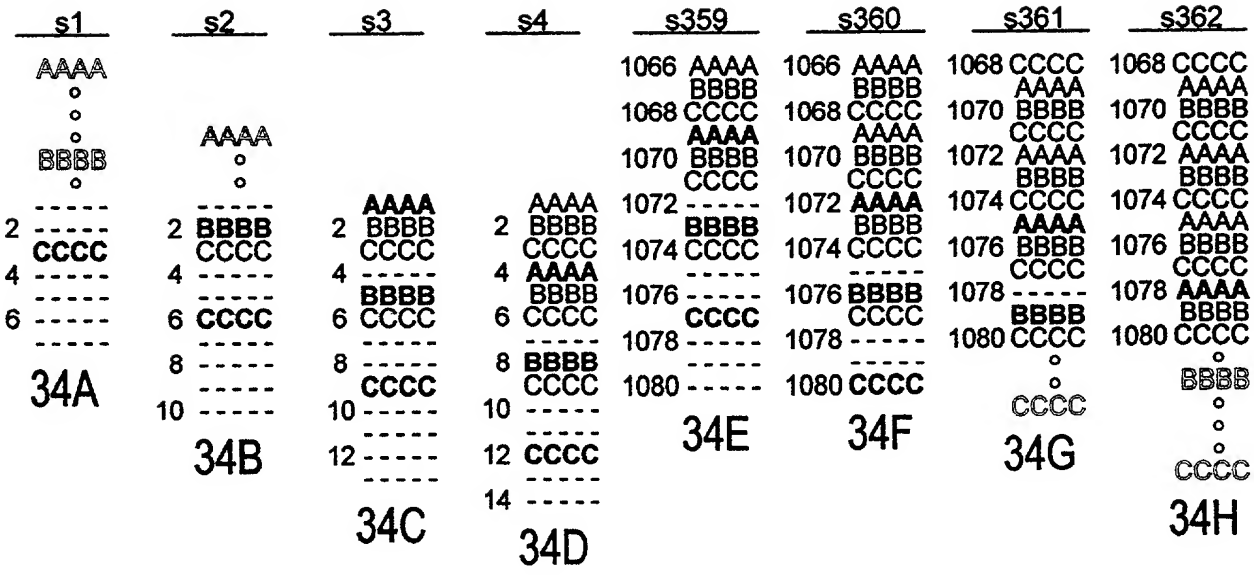


FIG. 33S



FIGs. 34A-34H

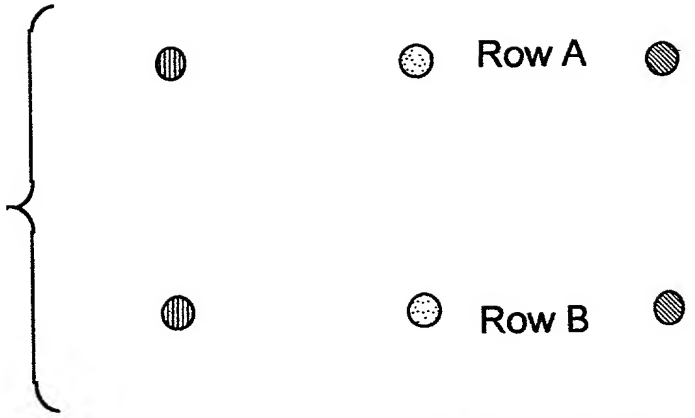


FIG. 35S

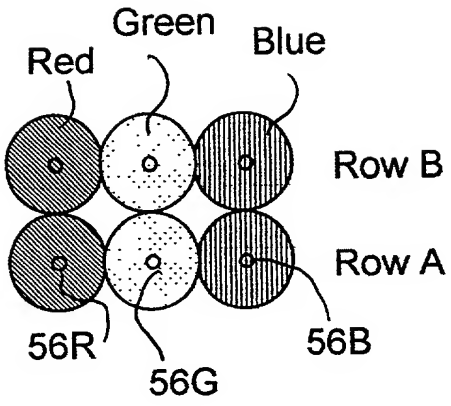
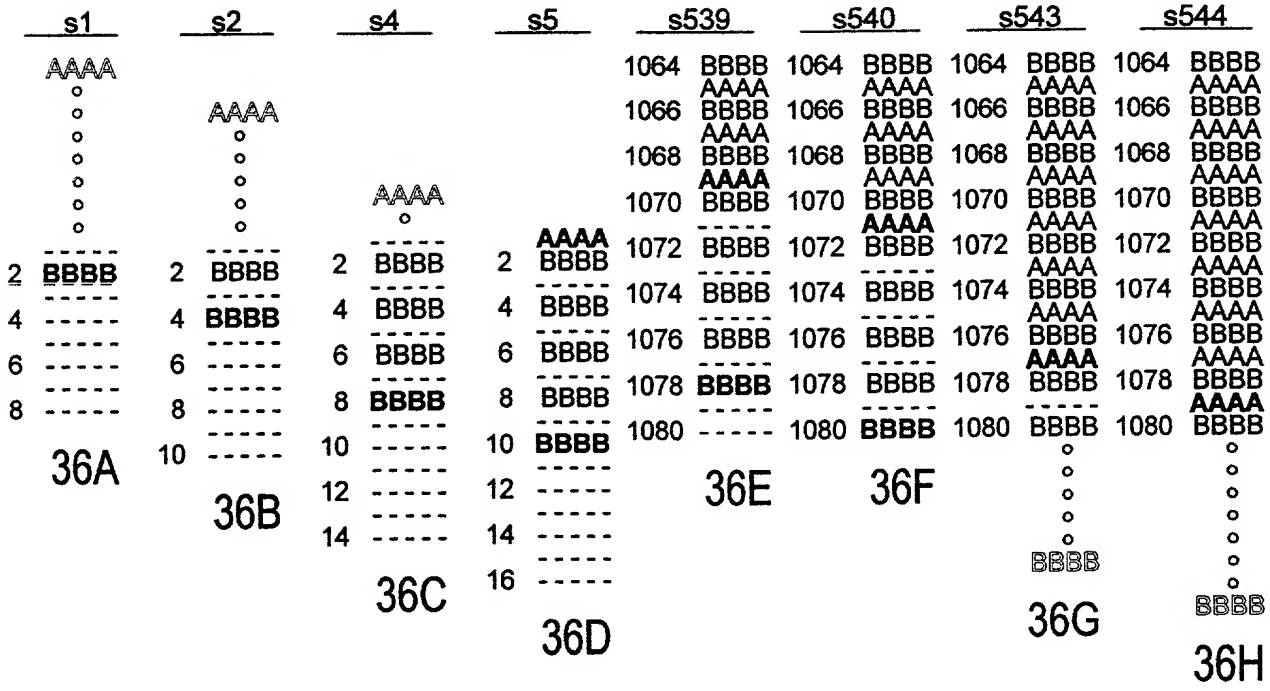
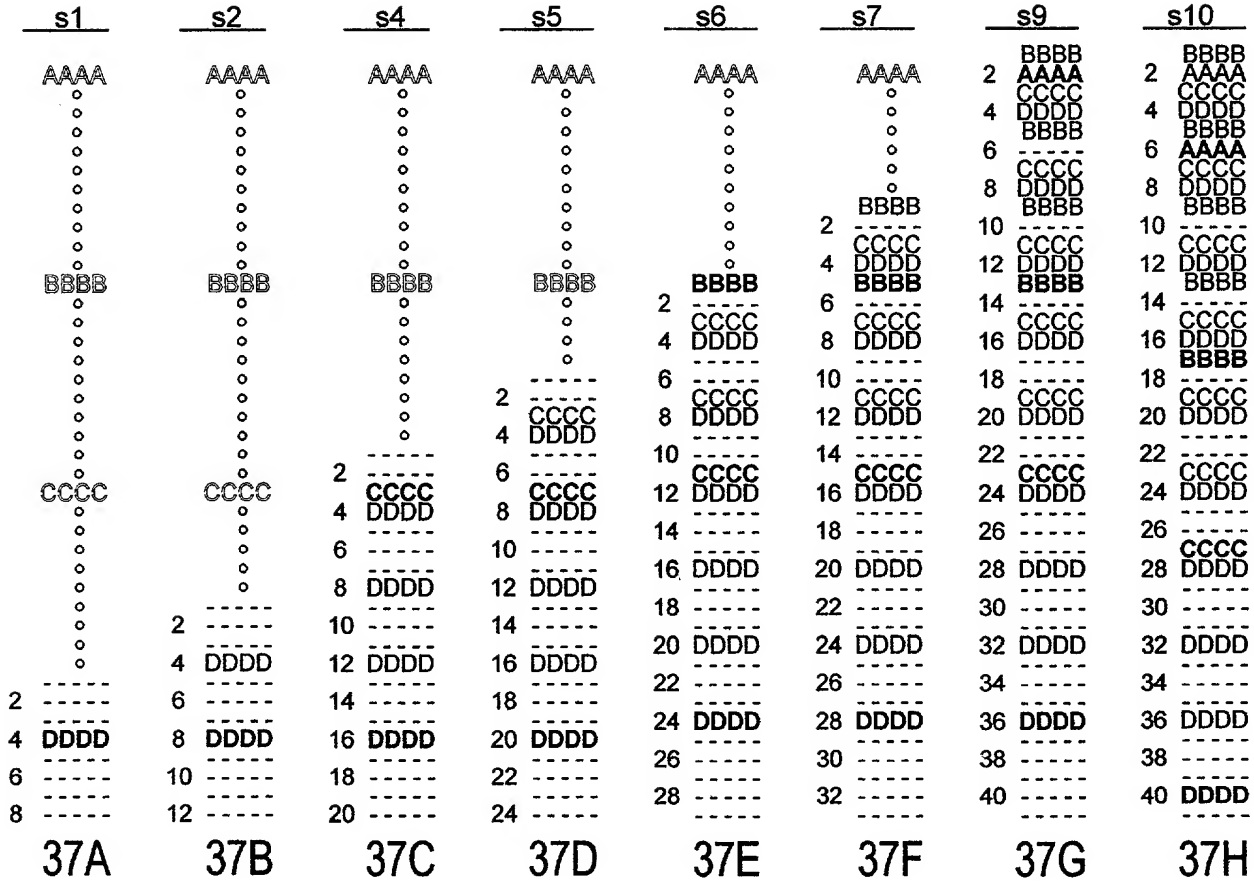


FIG. 35



FIGs.36A-36H


s1
s2
s4
s5
s6
s7
s9
s10
AAAA
BBBB
CCCC
DDDD
37A
37B
37C
37D
37E
37F
37G
37H

FIGs. 37A-37H

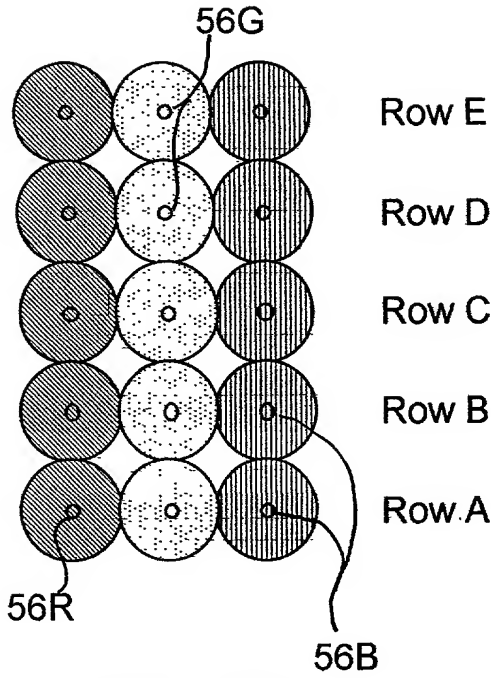


FIG. 38

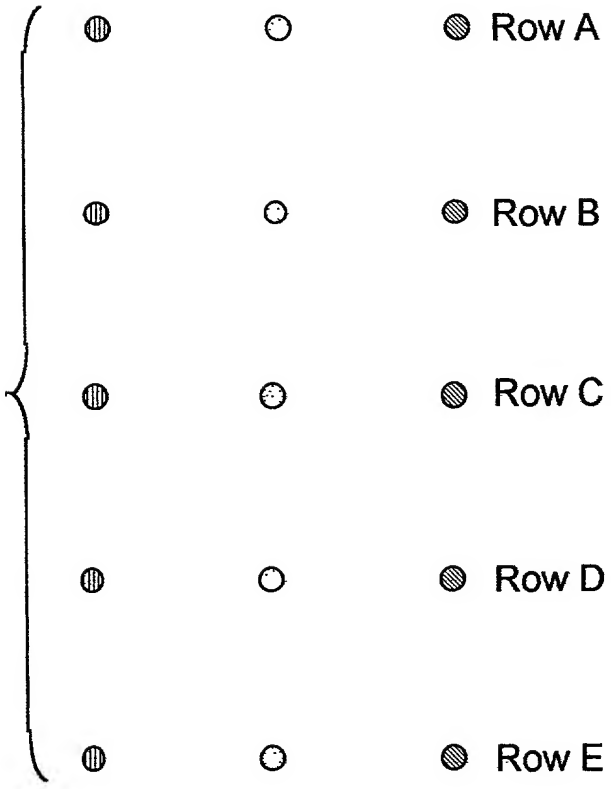
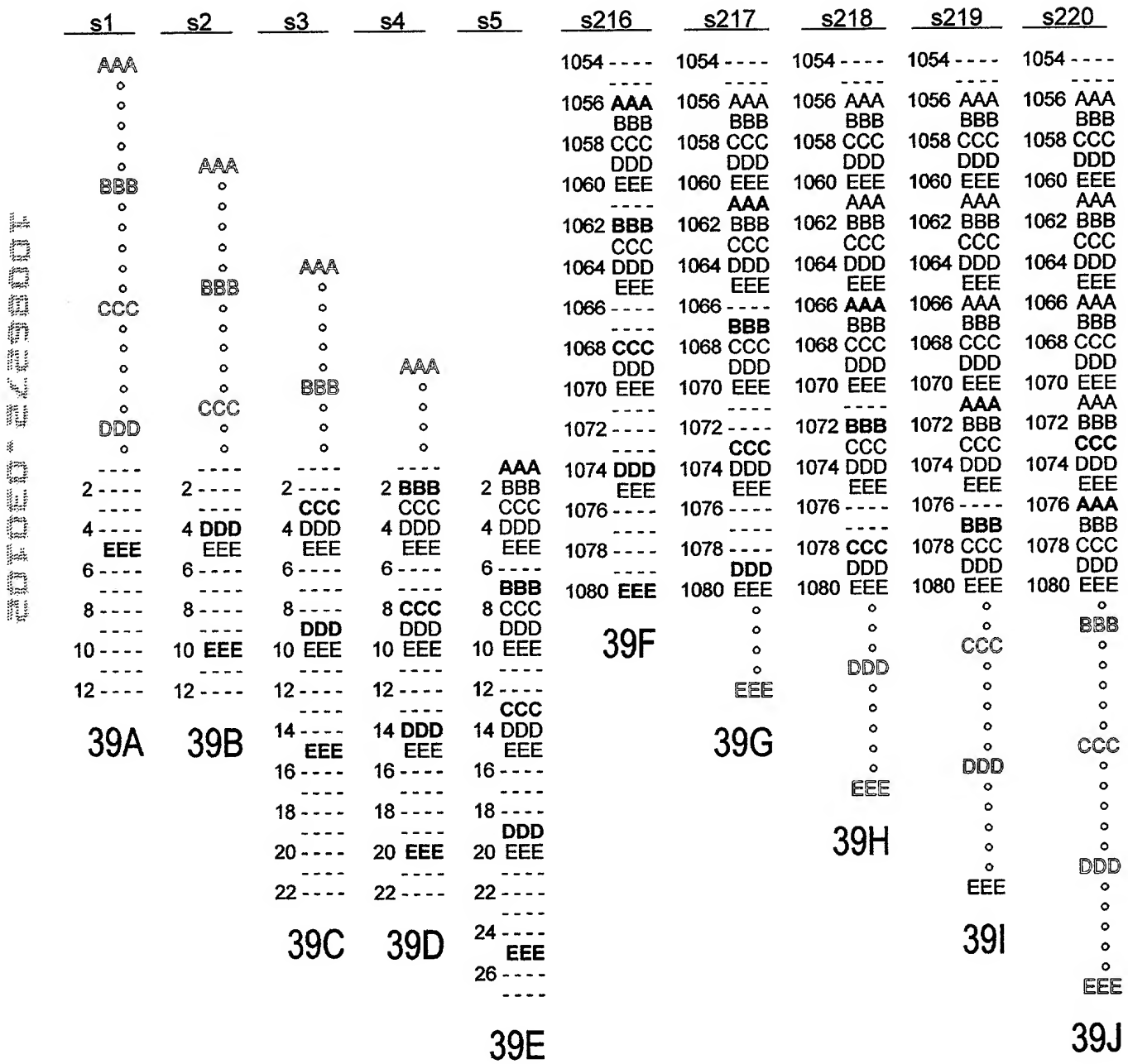


FIG. 38S


s1
s2
s3
s4
s5
s216
s217
s218
s219
s220
AAA
BBB
CCC
DDD
EEE
39A
39B
39C
39D
39E
39F
39G
39H
39I
39J

FIGs. 39A-39J

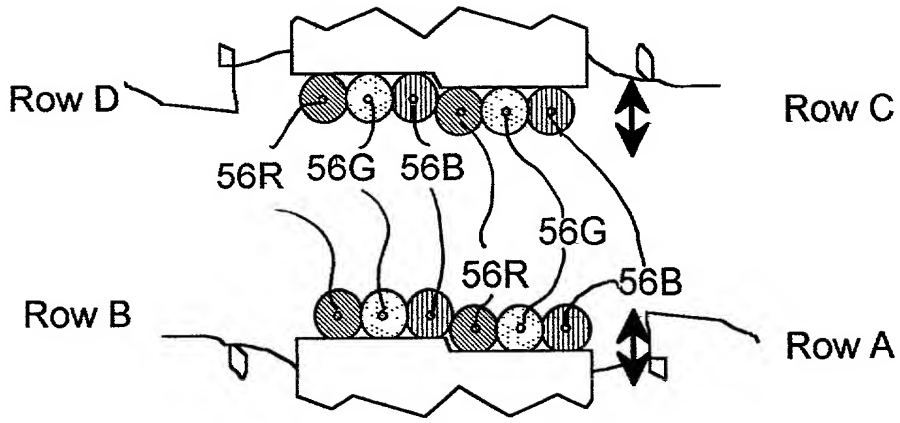


FIG. 40

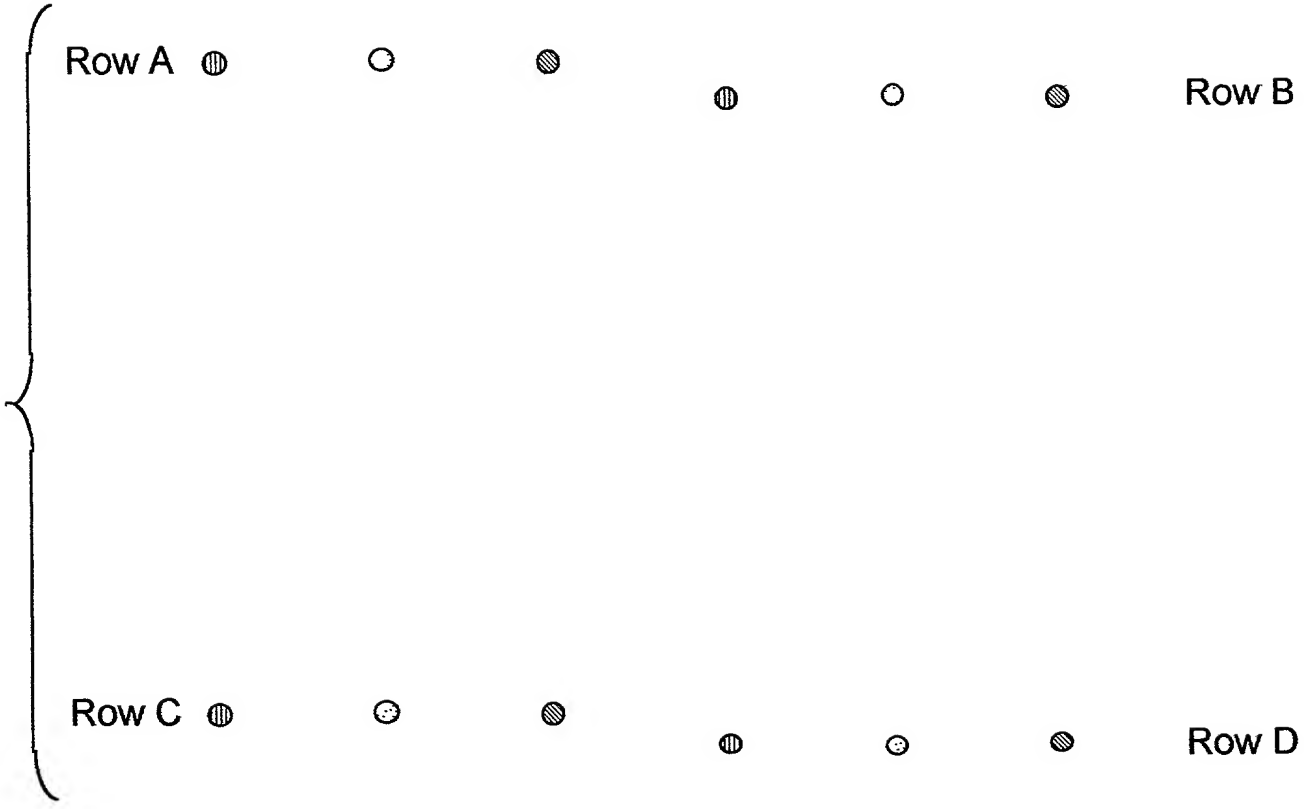


FIG. 40S

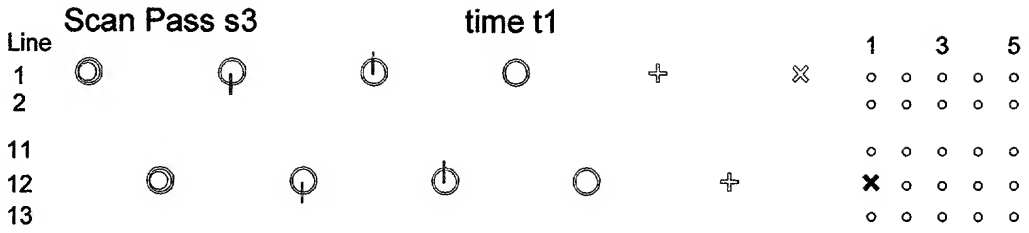


FIG. 41A

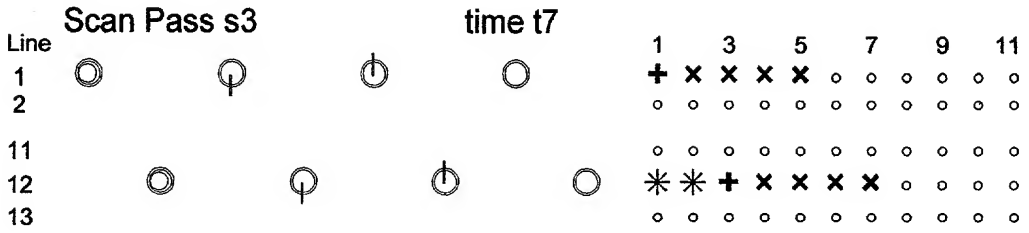


FIG. 41B

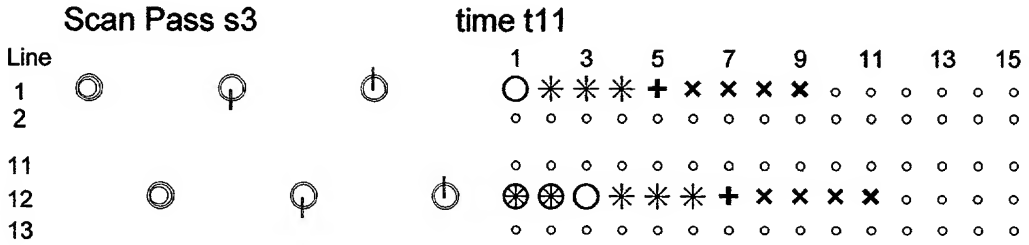


FIG. 41C

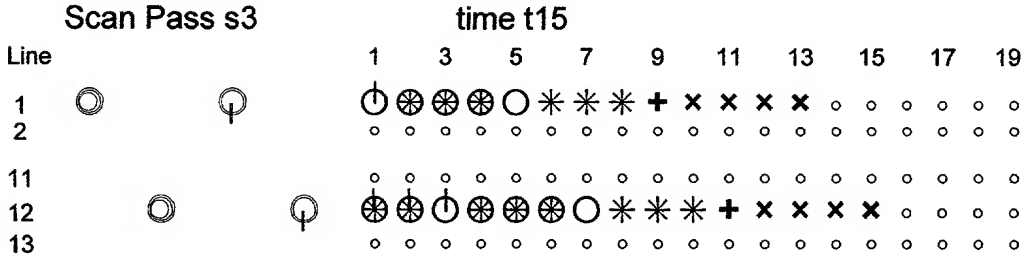


FIG. 41D

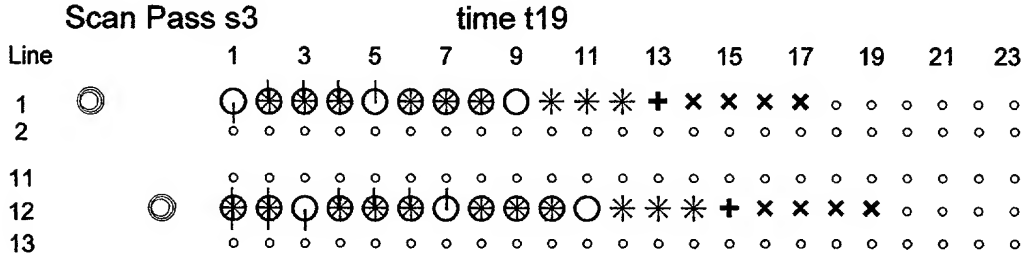


FIG. 41E

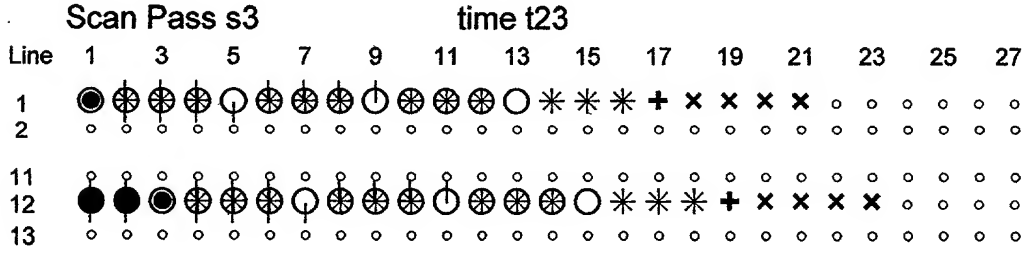
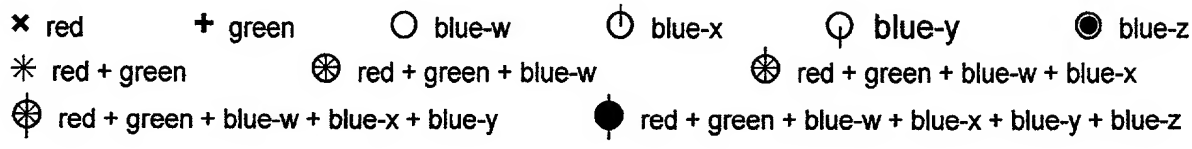


FIG. 41F



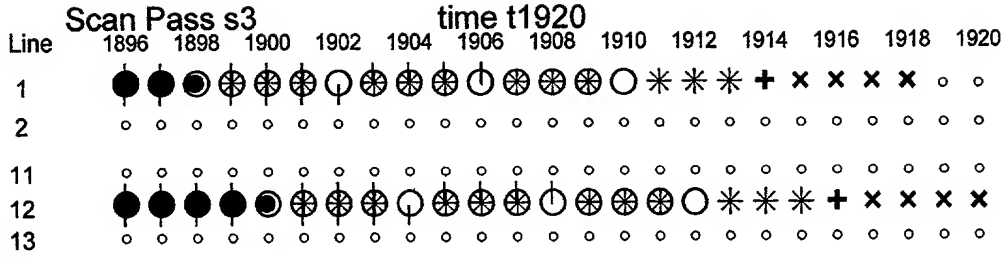


FIG. 42A

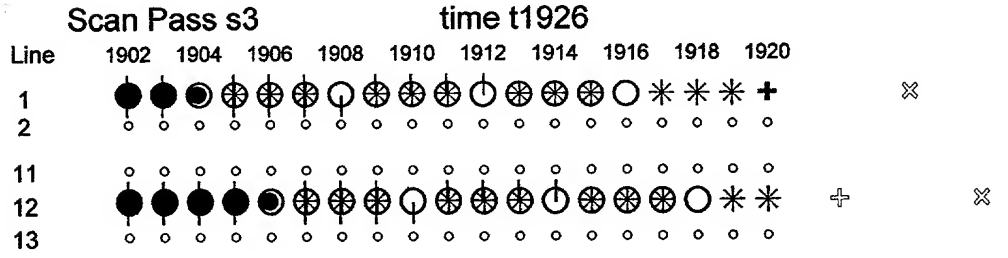


FIG. 42B

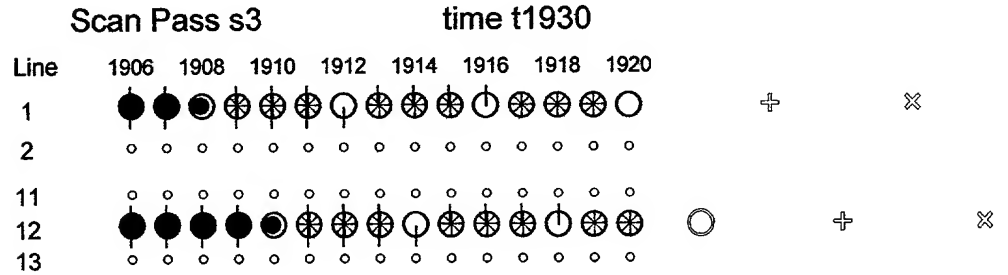


FIG. 42C

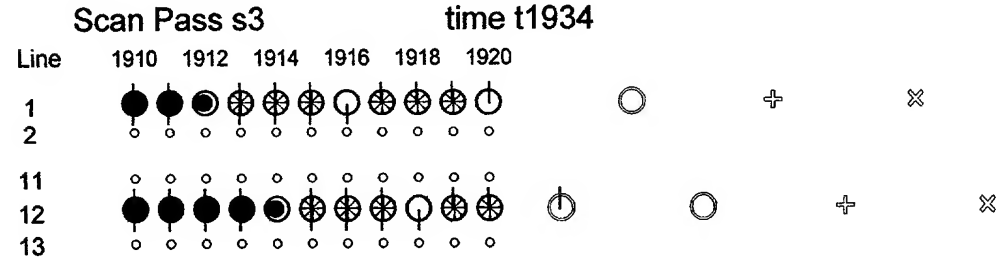


FIG. 42D

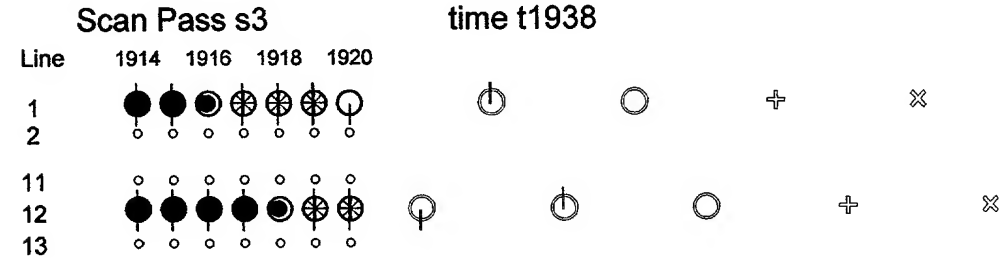


FIG. 42E

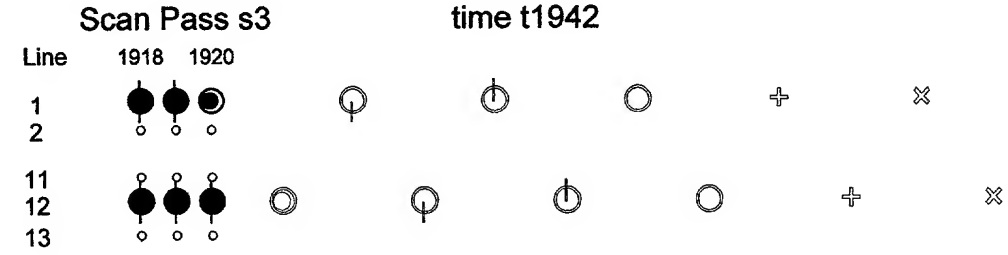
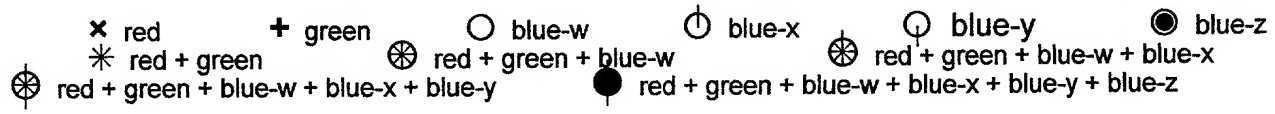


FIG. 42F



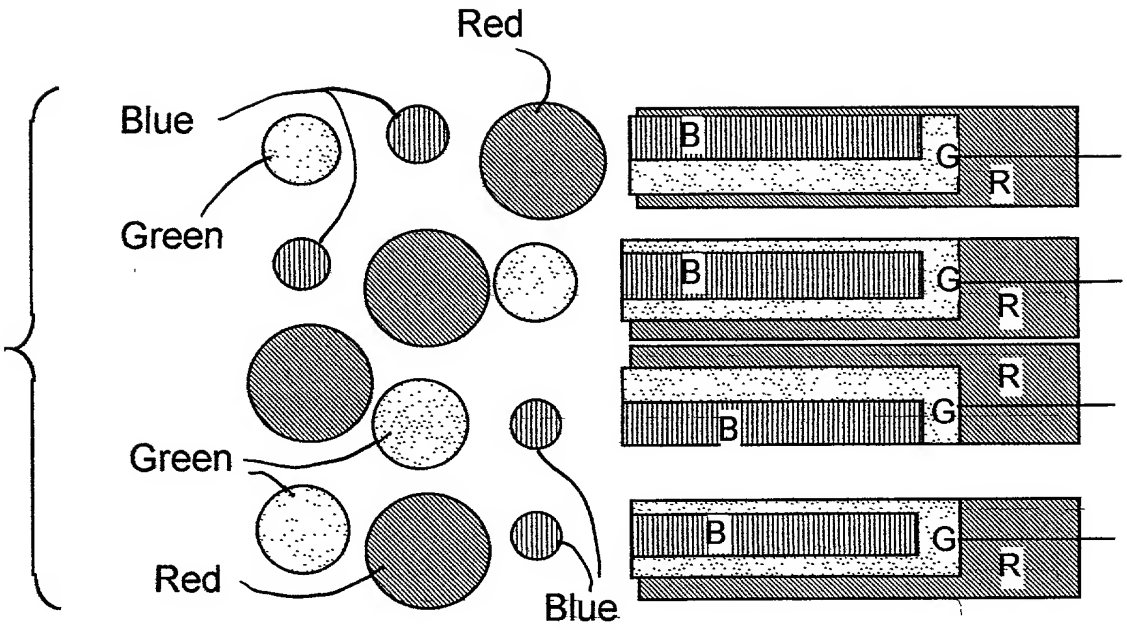

Red
Blue
Green
B
G
R
B
G
R
R
B
G
Green
Red
B
G
R
Blue

FIG. 43

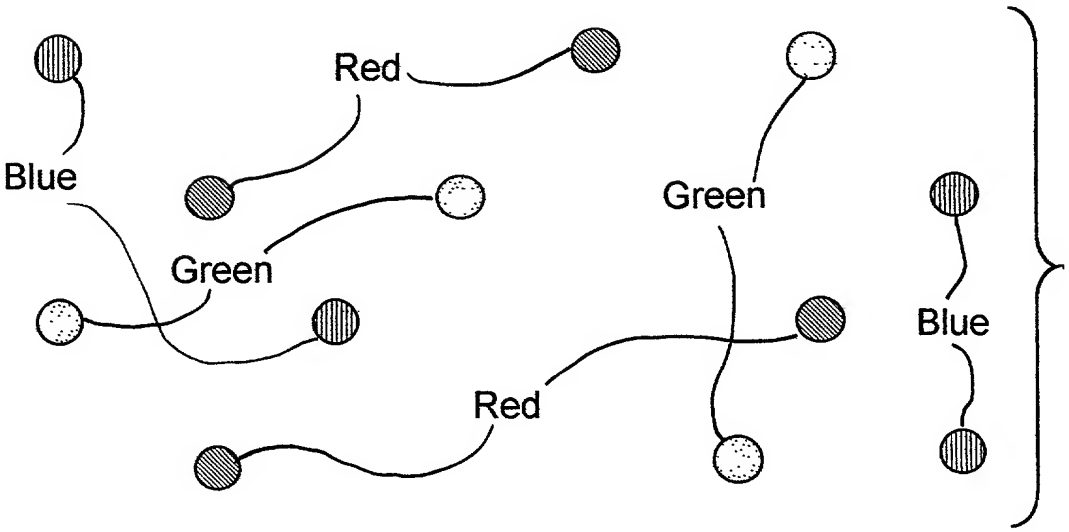

Red
Blue
Green
Green
Red
Blue

FIG. 44

Scan Pass s3 Time t1

Line	Dot												1		3
1													∘	∘	∘
2													∘	∘	∘
3	Ba								Ra			Ga	∘	∘	∘
4													∘	∘	∘
5													∘	∘	∘
6			Rb				Gb						**Bb**	∘	∘
7													∘	∘	∘
8													∘	∘	∘
9	Gc				Bc							Rc	∘	∘	∘
10													∘	∘	∘
11													∘	∘	∘
12			Rd							Gd			**Bd**	∘	∘
13													∘	∘	∘

FIG. 45A

Scan Pass s3 Time t3

Line	Dot												1		3		5
1													∘	∘	∘	∘	∘
2													∘	∘	∘	∘	∘
3	Ba									Ra			**Ga**	∘	∘	∘	∘
4													∘	∘	∘	∘	∘
5													∘	∘	∘	∘	∘
6			Rb				Gb						Bb	Bb	**Bb**	∘	∘
7													∘	∘	∘	∘	∘
8													∘	∘	∘	∘	∘
9	Gc				Bc								**Rc**	∘	∘	∘	∘
10													∘	∘	∘	∘	∘
11													∘	∘	∘	∘	∘
12			Rd							Gd			Bd	Bd	**Bd**	∘	∘
13													∘	∘	∘	∘	∘

FIG. 45B

Scan Pass s3 Time t5

Line	Dot												1		3		5		7
1													∘	∘	∘	∘	∘	∘	∘
2													∘	∘	∘	∘	∘	∘	∘
3	Ba								Ra				Ga	Ga	**Ga**	∘	∘	∘	∘
4													∘	∘	∘	∘	∘	∘	∘
5													∘	∘	∘	∘	∘	∘	∘
6			Rb				Gb						Bb	Bb	Bb	Bb	**Bb**	∘	∘
7													∘	∘	∘	∘	∘	∘	∘
8													∘	∘	∘	∘	∘	∘	∘
9	Gc				Bc								Rc	Rc	**Rc**	∘	∘	∘	∘
10													∘	∘	∘	∘	∘	∘	∘
11													∘	∘	∘	∘	∘	∘	∘
12			Rd										**Gd**	Bd	Bd	Bd	**Bd**	∘	∘
13													∘	∘	∘	∘	∘	∘	∘

FIG. 45C

Scan Pass s3 Time t9

Line	Dot												1		3		5		7		9		11
1													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
2													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
3	Ba												RGRG	**Ra**	Ga	Ga	Ga	Ga	**Ga**	∘	∘	∘	∘
4													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
5													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
6			Rb										**Gb**	Bb	Bb	Bb	Bb	Bb	Bb	Bb	Bb	**Bb**	∘	∘
7													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
8													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
9	Gc						Bc						Rc	Rc	Rc	Rc	Rc	Rc	**Rc**	∘	∘	∘	∘
10													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
11													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
12			Rd										GBGBGBGB	**Gd**	Bd	Bd	Bd	Bd	**Bd**	∘	∘	∘	∘
13													∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘

FIG. 45D

Scan Pass s3 Time t13

Line		1		3		5		7		9		11		13		15
1		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
2		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
3	Ba	RGRGRGRGRGRG	**Ra**	Ga	Ga	Ga	**Ga**	∘	∘	∘	∘					
4		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
5		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
6		**Rb**	GBGBGB	**Gb**	Bb	Bb	Bb	Bb	Bb	Bb	Bb	**Bb**	∘	∘		
7		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
8		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
9	Gc	BRBR	**Bc**	Rc	Rc	Rc	Rc	Rc	Rc	Rc	**Rc**	∘	∘	∘	∘	
10		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
11		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
12		**Rd**	GBGBGBGBGBGBGB	**Gd**	Bd	Bd	Bd	**Bd**	∘	∘						
13		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘

FIG. 45E

Scan Pass s3 Time t15

Line	1		3		5		7		9		11		13		15		17
1	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
2	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
3	**Ba**	RGRGRGRGRGRGRG	**Ra**	Ga	Ga	Ga	**Ga**	∘	∘	∘	∘						
4	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
5	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
6	X	X	**Rb**	GBGBGB	**Gb**	Bb	Bb	Bb	Bb	Bb	Bb	Bb	**Bb**	∘	∘		
7	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
8	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
9	**Gc**	BRBRBR	**Bc**	Rc	Rc	Rc	Rc	Rc	Rc	Rc	**Rc**	∘	∘	∘	∘		
10	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
11	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
12	X	X	**Rd**	GBGBGBGBGBGBGB	**Gd**	Bd	Bd	Bd	**Bd**	∘	∘						
13	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘

FIG. 45F

Scan Pass s3 Time t1920

Line	1904	1906	1908	1910	1912	1914	1916	1918	1920
1	∘	∘	∘	∘	∘	∘	∘	∘	∘
2	∘	∘	∘	∘	∘	∘	∘	∘	∘
3	X	X	**Ba**	RGRGRGRGRGRGRG	**Ra**	Ga	Ga	Ga	**Ga** ∘ ∘
4	∘	∘	∘	∘	∘	∘	∘	∘	∘
5	∘	∘	∘	∘	∘	∘	∘	∘	∘
6	X	X	X	X **Rb**	GBGBGBG	**Gb**	Bb	Bb	Bb Bb Bb Bb **Bb**
7	∘	∘	∘	∘	∘	∘	∘	∘	∘
8	∘	∘	∘	∘	∘	∘	∘	∘	∘
9	X	X	**Gc**	BRBRBR	**Bc**	Rc	Rc	Rc	Rc Rc Rc **Rc** ∘ ∘
10	∘	∘	∘	∘	∘	∘	∘	∘	∘
11	∘	∘	∘	∘	∘	∘	∘	∘	∘
12	X	X	X	X **Rd**	GBGBGBGBGBGBGBG	**Gd**	Bd	Bd	Bd **Bd**
13	∘	∘	∘	∘	∘	∘	∘	∘	∘

FIG. 46A

Scan Pass s3 Time t1922

Line	1906	1908	1910	1912	1914	1916	1918	1920
1	∘	∘	∘	∘	∘	∘	∘	∘
2	∘	∘	∘	∘	∘	∘	∘	∘
3	X	X	**Ba**	RGRGRGRGRGRGRG	**Ra**	Ga	Ga	Ga **Ga**
4	∘	∘	∘	∘	∘	∘	∘	∘
5	∘	∘	∘	∘	∘	∘	∘	∘
6	X	X	X	X **Rb**	GBGBGBG	**Gb**	Bb	Bb Bb Bb Bb Bb Bb
7	∘	∘	∘	∘	∘	∘	∘	∘
8	∘	∘	∘	∘	∘	∘	∘	∘
9	X	X	**Gc**	BRBRBR	**Bc**	Rc	Rc	Rc Rc Rc Rc **Rc**
10	∘	∘	∘	∘	∘	∘	∘	∘
11	∘	∘	∘	∘	∘	∘	∘	∘
12	X	X	X	X **Rd**	GBGBGBGBGBGBGBG	**Gd**	Bd	Bd Bd
13	∘	∘	∘	∘	∘	∘	∘	∘

FIG. 46B

Scan Pass s3 Time t1926

Line	1910	1912	1914	1916	1918	1920
1	∘	∘	∘	∘	∘	∘
2	∘	∘	∘	∘	∘	∘
3	X	X	**Ba**	RGRGRGRGRGRGRG	**Ra**	Ga
4	∘	∘	∘	∘	∘	∘
5	∘	∘	∘	∘	∘	∘
6	X	X	X	X **Rb**	GBGBGBG	**Gb** Bb Bb Bb
7	∘	∘	∘	∘	∘	∘
8	∘	∘	∘	∘	∘	∘
9	X	X	**Gc**	BRBRBR	**Bc**	Rc Rc Rc Rc
10	∘	∘	∘	∘	∘	∘
11	∘	∘	∘	∘	∘	∘
12	X	X	X	X **Rd**	GBGBGBGBGBGBG	Gd Bd
13	∘	∘	∘	∘	∘	∘

FIG. 46C

Scan Pass s3 Time t1930

Line	1914	1916	1918	1920
1	∘	∘	∘	∘
2	∘	∘	∘	∘
3	X	X	**Ba**	RGRGRGRG Ra Ga
4	∘	∘	∘	∘
5	∘	∘	∘	∘
6	X	X	X	X **Rb** GBGB Gb Bb
7	∘	∘	∘	∘
8	∘	∘	∘	∘
9	X	X	**Gc**	BRBRBR **Bc** Rc
10	∘	∘	∘	∘
11	∘	∘	∘	∘
12	X	X	X	X **Rd** GBGB Gd Bd
13	∘	∘	∘	∘

FIG. 46D

Scan Pass s3 Time t1932

Line	1916	1918	1920
1	∘	∘	∘
2	∘	∘	∘
3	X	X	**Ba** RGRG Ra Ga
4	∘	∘	∘
5	∘	∘	∘
6	X	X	X X **Rb** Gb Bb
7	∘	∘	∘
8	∘	∘	∘
9	X	X	**Gc** BRBR Bc Rc
10	∘	∘	∘
11	∘	∘	∘
12	X	X	X X **Rd** Gd Bd
13	∘	∘	∘

FIG. 46E

Scan Pass s3 Time t1934

Line	1918	1920
1	∘	∘
2	∘	∘
3	X	X **Ba** Ra Ga
4	∘	∘
5	∘	∘
6	X	X X Rb Gb Bb
7	∘	∘
8	∘	∘
9	X	X **Gc** Bc Rc
10	∘	∘
11	∘	∘
12	X	X X Rd Gd Bd
13	∘	∘

FIG. 46F

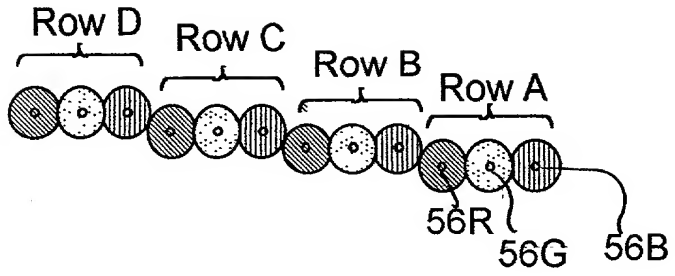


FIG. 47

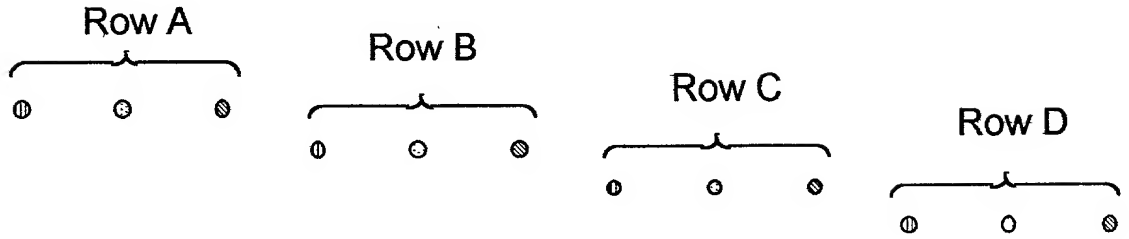


FIG. 47S

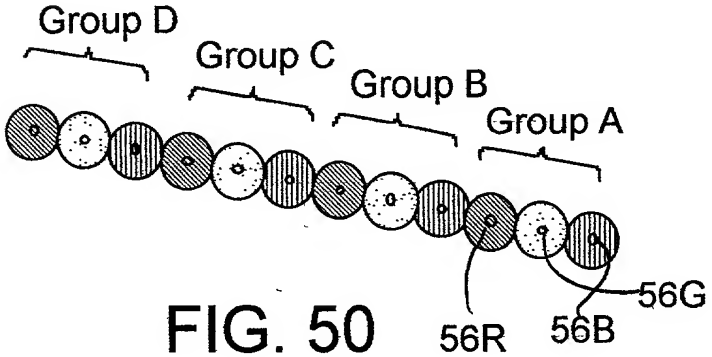


FIG. 50

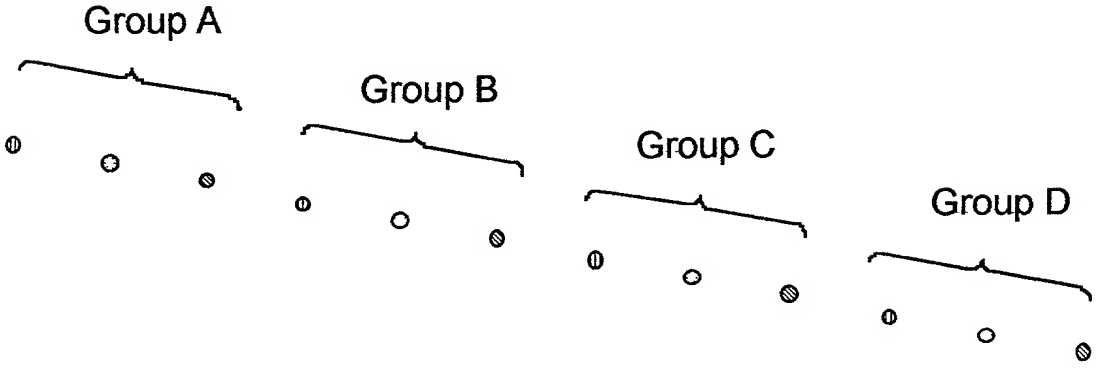


FIG. 50S

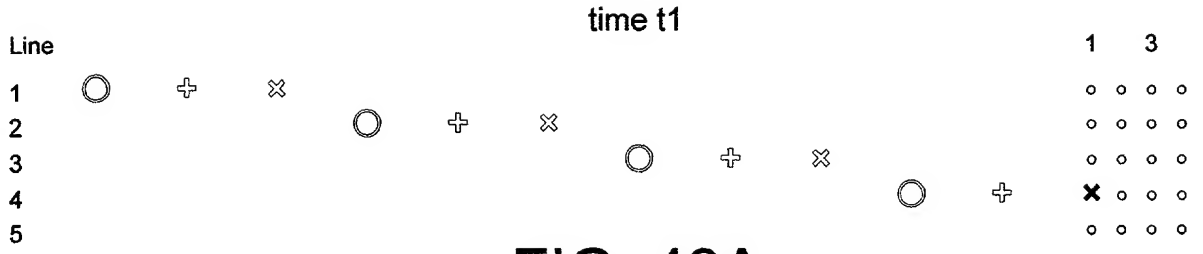


FIG. 48A

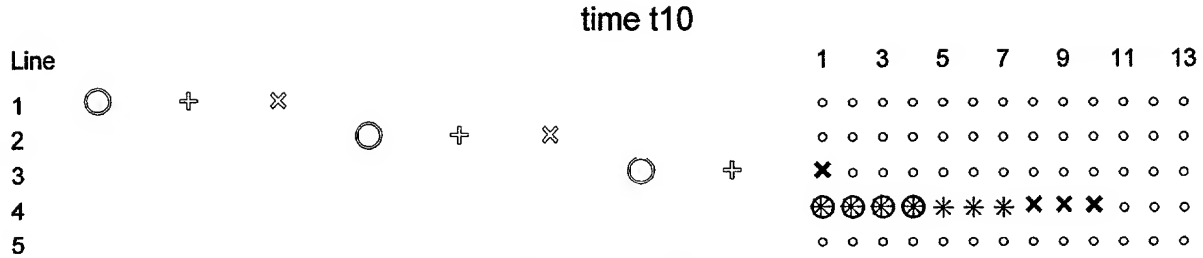


FIG. 48B

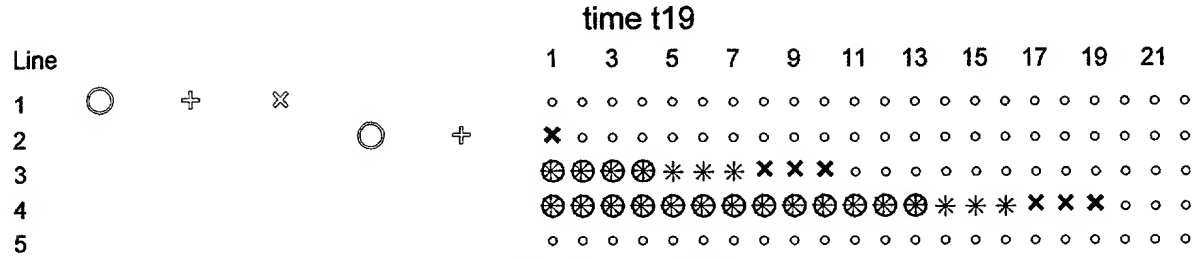


FIG. 48C

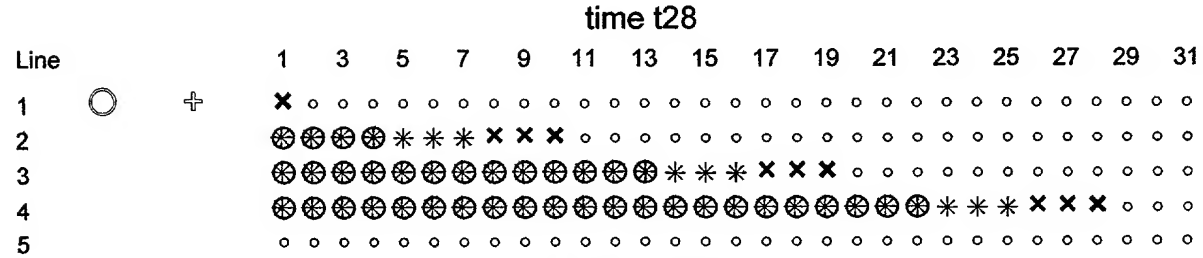


FIG. 48D

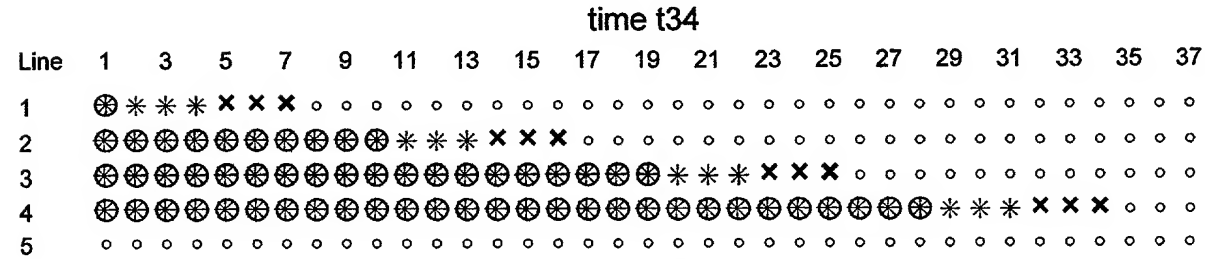


FIG. 48E

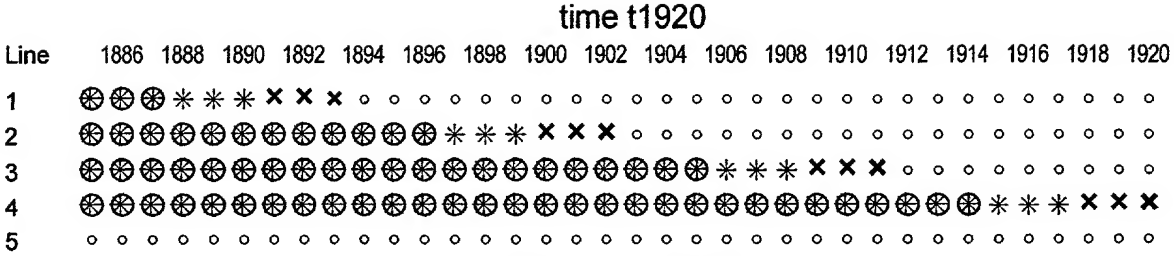


FIG. 49A

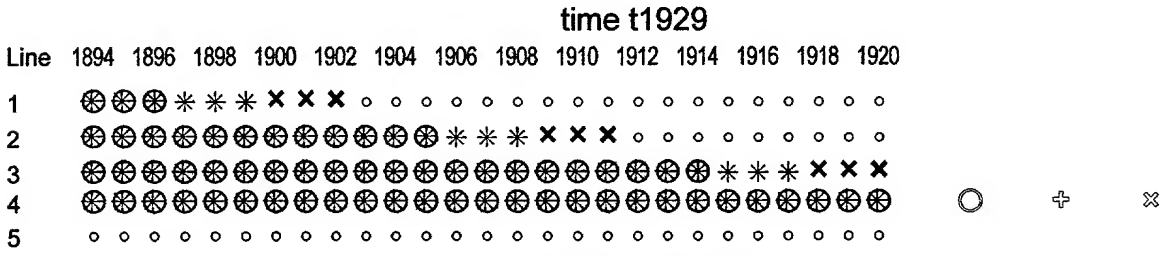


FIG. 49B

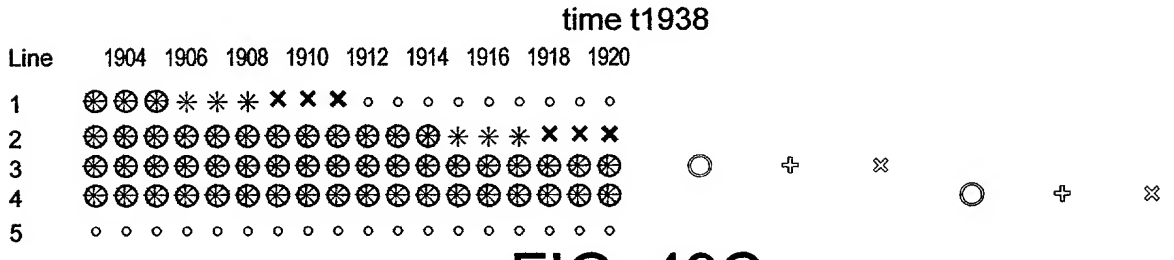


FIG. 49C

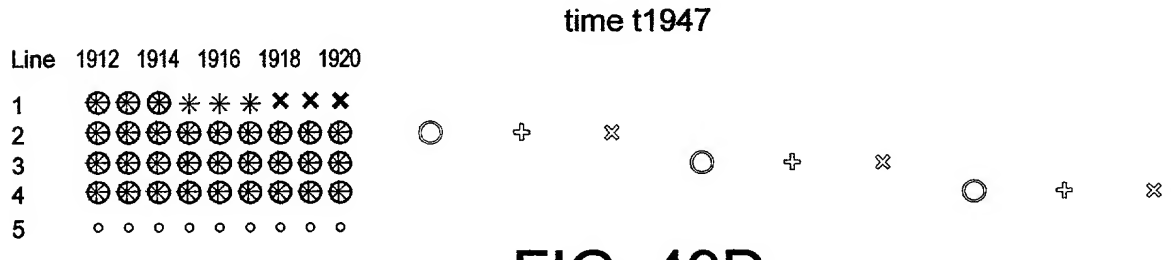


FIG. 49D

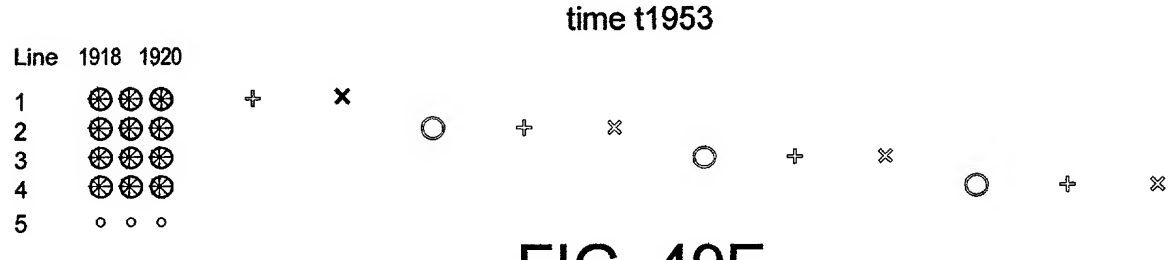


FIG. 49E

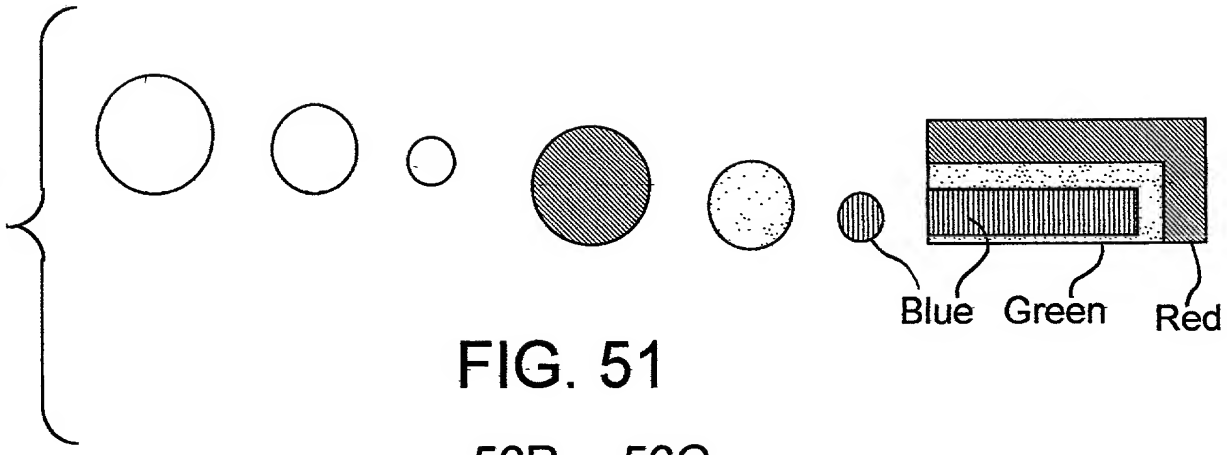


FIG. 51

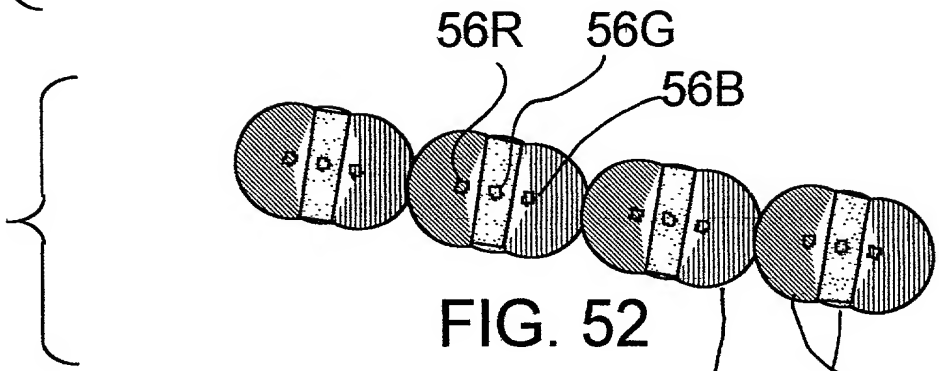


FIG. 52

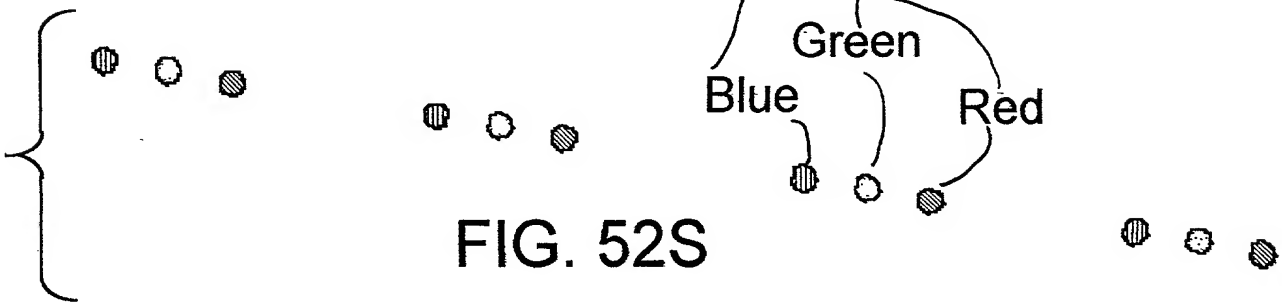


FIG. 52S

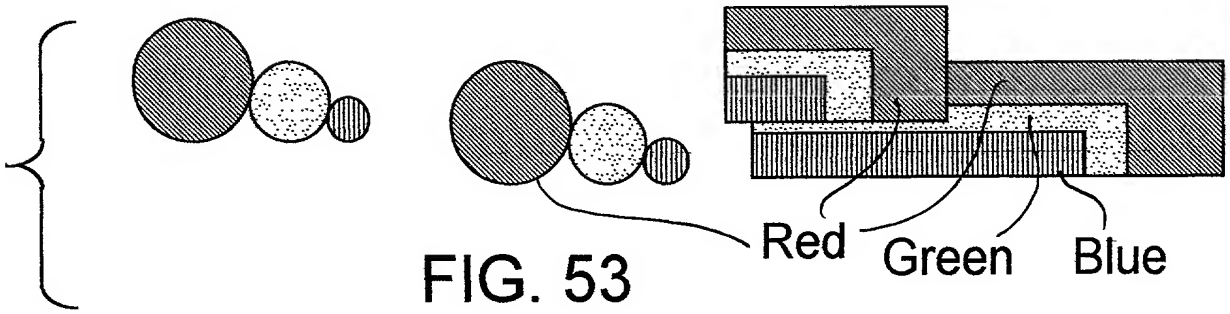


FIG. 53

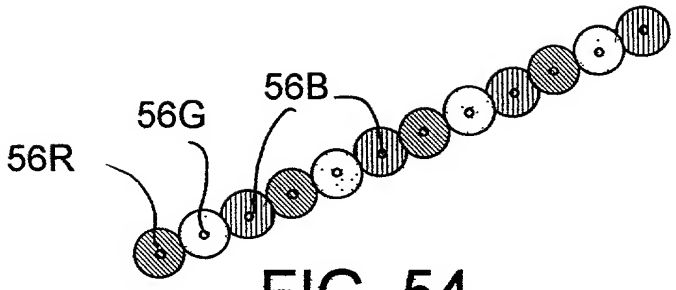


FIG. 54

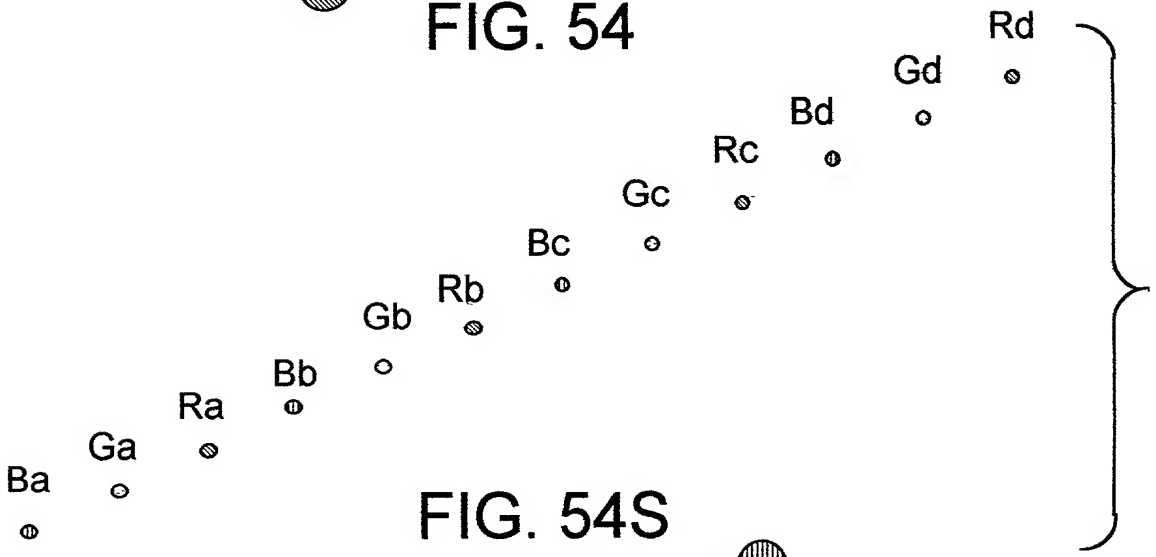


FIG. 54S

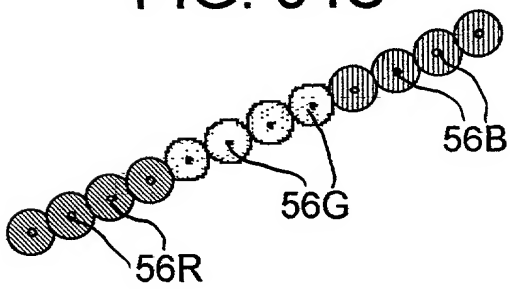


FIG. 58

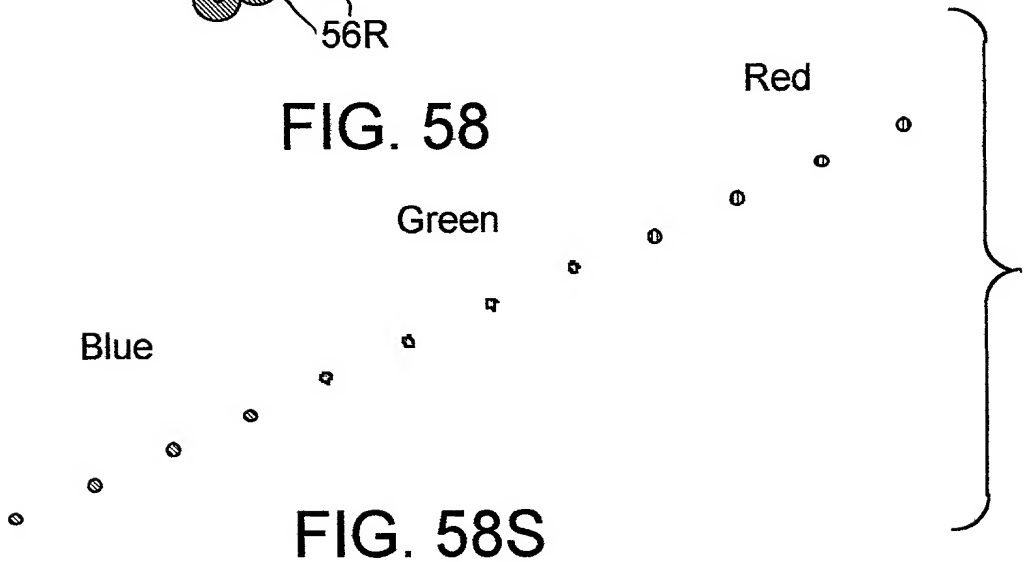
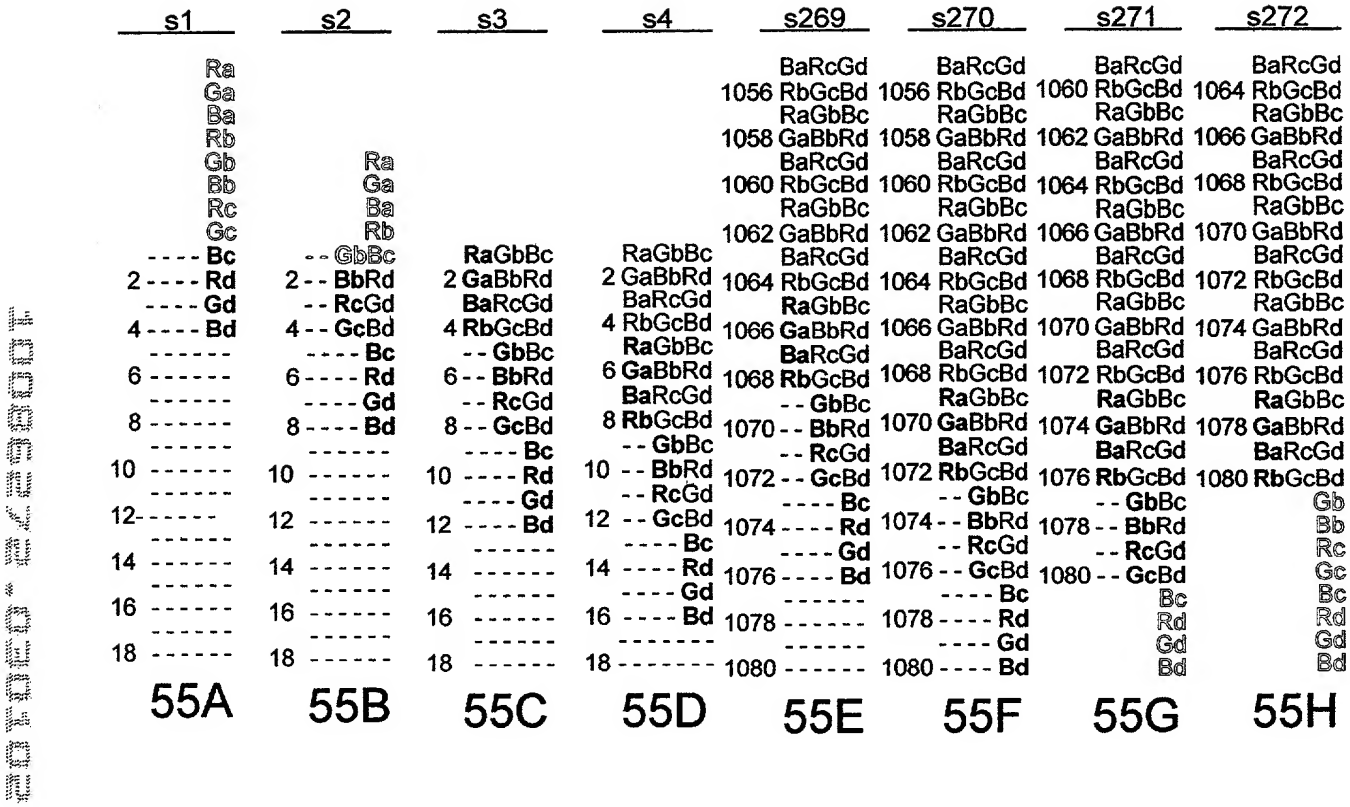


FIG. 58S



FIGs. 55A-55H

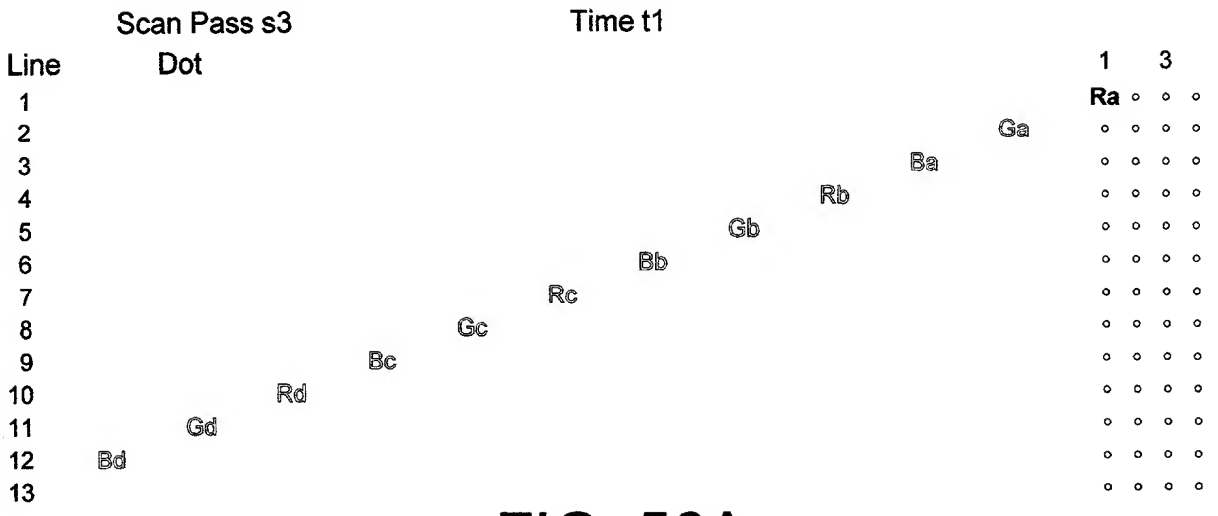


FIG. 56A

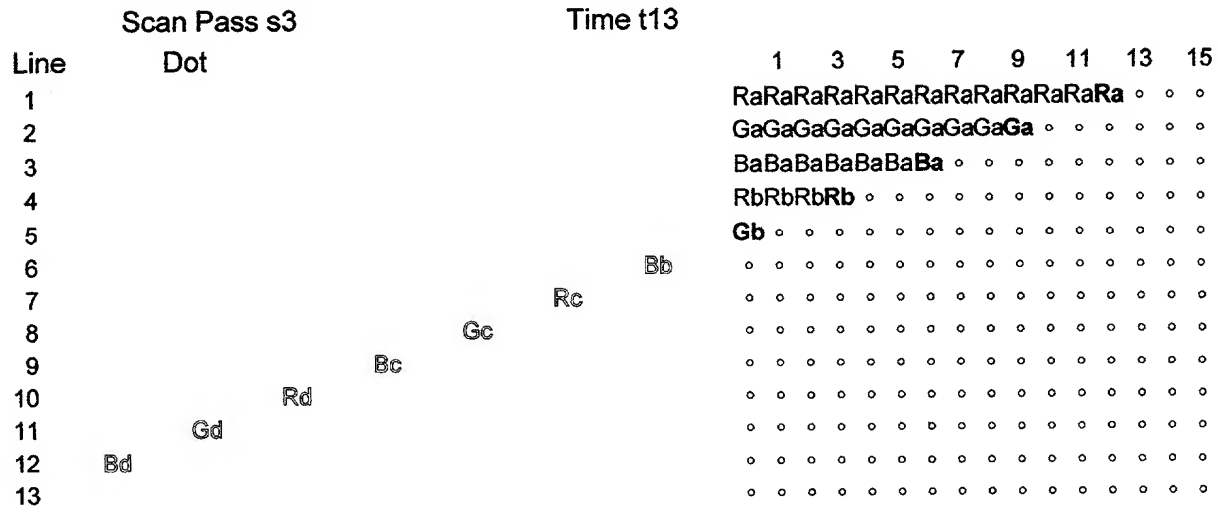


FIG. 56B

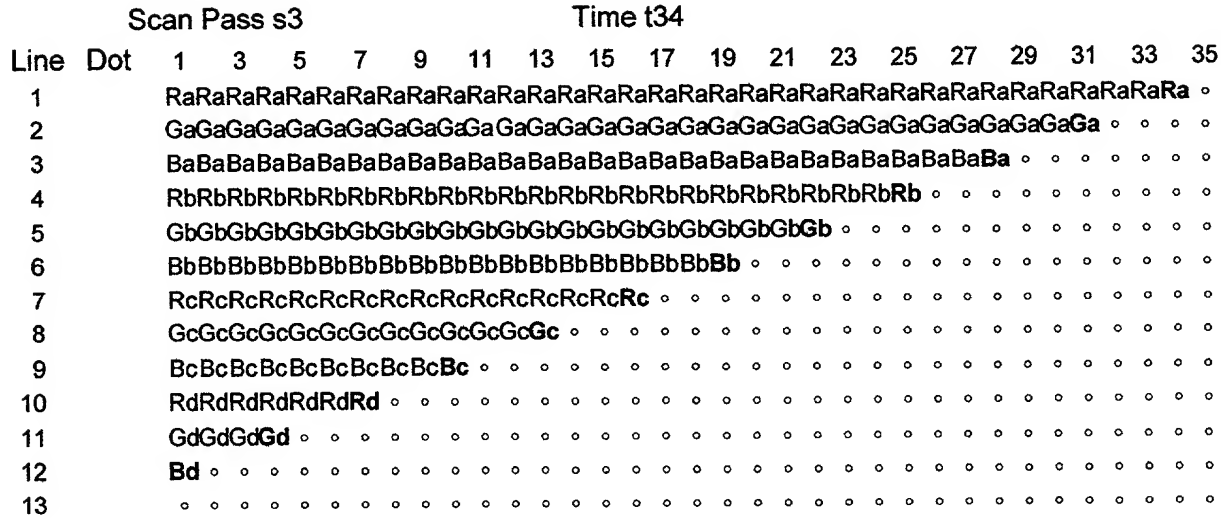


FIG. 56C

Scan Pass s3 Time t1920

Line	Dot	1888	1890	1892	1894	1896	1898	1900	1902	1904	1906	1908	1910	1912	1914	1916	1918	1920
1		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	**Ra**
2		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	**Ga**	∘
3		B	B	B	B	B	B	B	B	B	B	B	B	B	B	**Ba**	∘	∘
4		R	R	R	R	R	R	R	R	R	R	R	R	R	**Rb**	∘	∘	∘
5		G	G	G	G	G	G	G	G	G	G	G	G	**Gb**	∘	∘	∘	∘
6		B	B	B	B	B	B	B	B	B	B	B	**Bb**	∘	∘	∘	∘	∘
7		R	R	R	R	R	R	R	R	R	R	**Rc**	∘	∘	∘	∘	∘	∘
8		G	G	G	G	G	G	G	G	G	**Gc**	∘	∘	∘	∘	∘	∘	∘
9		B	B	B	B	B	B	B	B	**Bc**	∘	∘	∘	∘	∘	∘	∘	∘
10		R	R	R	R	R	R	**Rd**	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
11		G	G	G	**Gd**	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
12		**Bd**	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
13		∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘

FIG. 57A

Scan Pass s3 Time t1935

Line	1902	1904	1906	1908	1910	1912	1914	1916	1918	1920
1	R	R	R	R	R	R	R	R	R	R
2	G	G	G	G	G	G	G	G	G	G
3	B	B	B	B	B	B	B	B	B	B
4	R	R	R	R	R	R	R	R	R	R
5	G	G	G	G	G	G	G	G	G	G
6	B	B	B	B	B	B	B	B	B	**Bb**
7	R	R	R	R	R	R	R	R	**Rc**	∘
8	G	G	G	G	G	G	G	**Gc**	∘	∘
9	B	B	B	B	B	B	**Bc**	∘	∘	∘
10	R	R	R	R	R	**Rd**	∘	∘	∘	∘
11	G	G	G	**Gd**	∘	∘	∘	∘	∘	∘
12	**Bd**	∘	∘	∘	∘	∘	∘	∘	∘	∘
13	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘

Ra
Ga
Ba
Rb
Gb

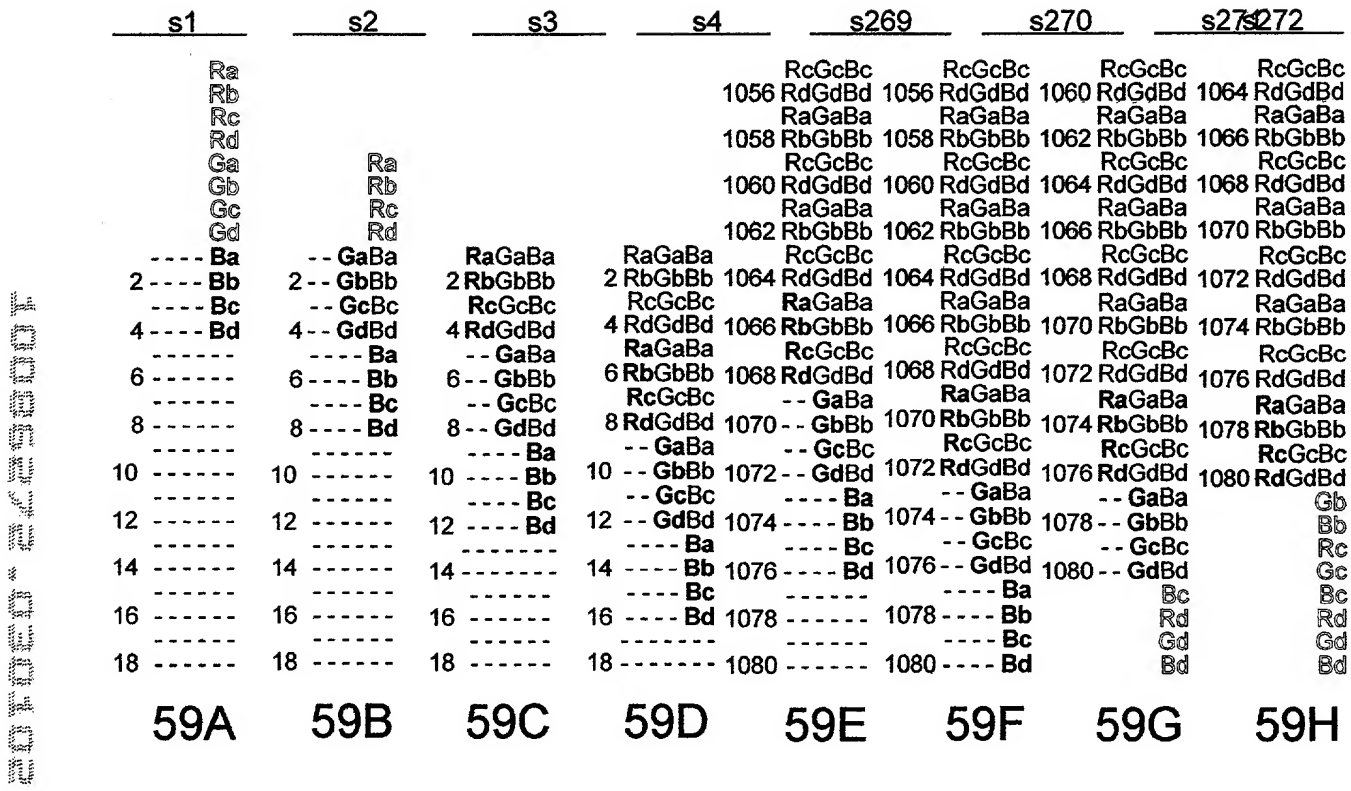
FIG. 57B

Scan Pass s3 Time t1953

Line	1918	1920
1	R	R
2	G	G
3	B	B
4	R	R
5	G	G
6	B	B
7	R	R
8	G	G
9	B	B
10	R	R
11	G	G
12	B	**Bd**
13	∘	∘

Ra
Ga
Ba
Rb
Gb
Bb
Rc
Gc
Bc
Rd
Gd

FIG. 57C



FIGs. 59A-59H

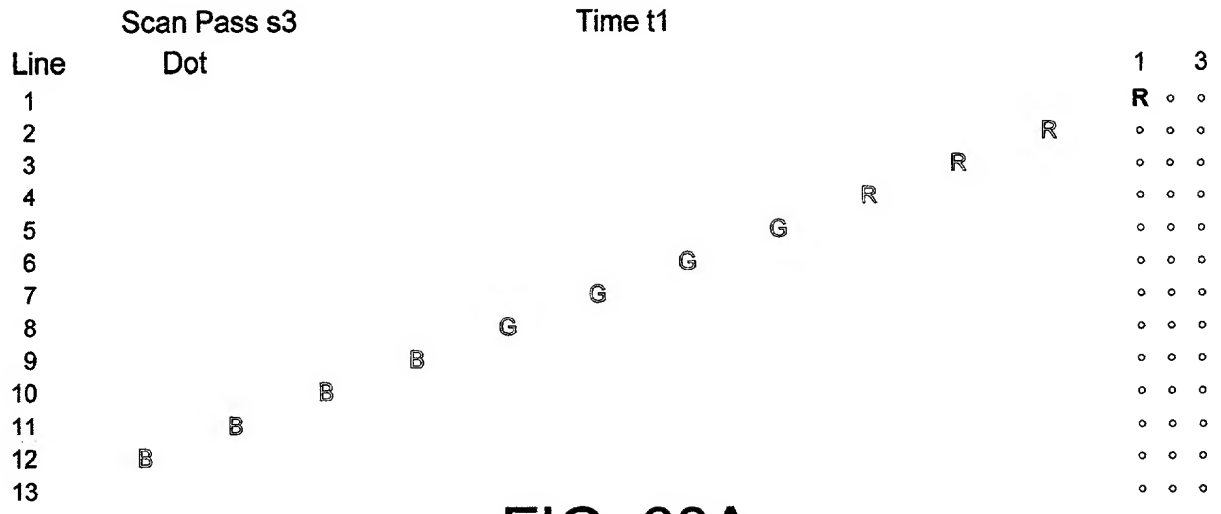


FIG. 60A

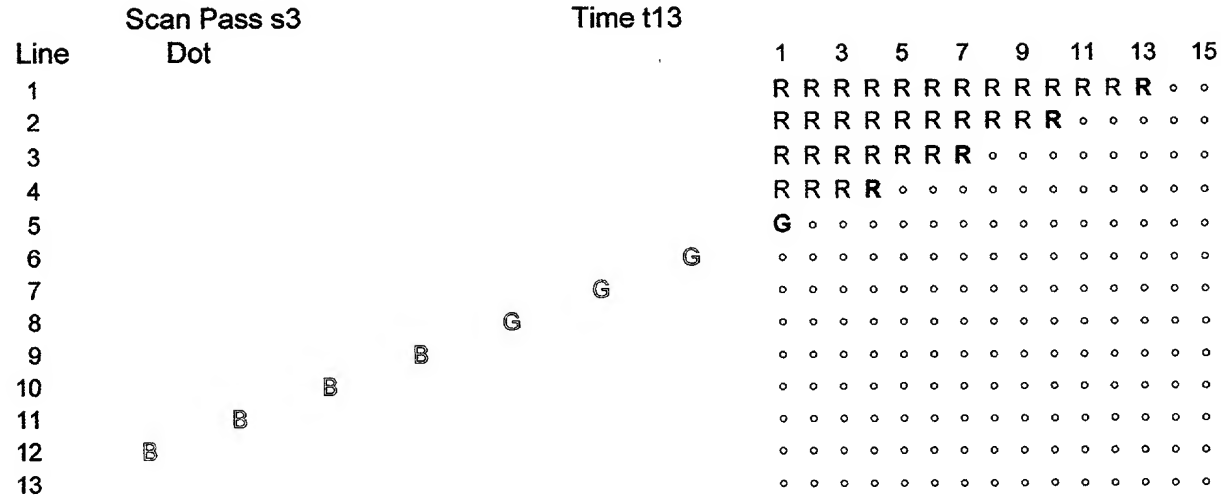


FIG. 60B

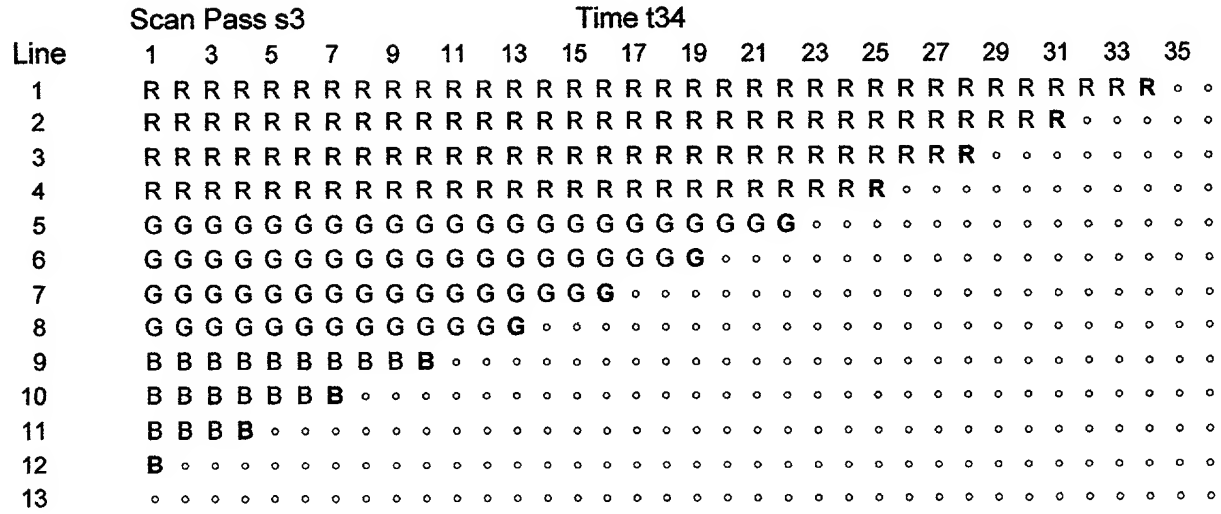


FIG. 60C

Scan Pass s3 Time t1920

Line	1886	1888	1890	1892	1894	1896	1898	1900	1902	1904	1906	1908	1910	1912	1914	1916	1918	1920
1	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	**Ra**
2	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	**Rb**	∘
3	R	R	R	R	R	R	R	R	R	R	R	R	R	R	**Rc**	∘	∘	∘
4	R	R	R	R	R	R	R	R	R	R	R	R	R	**Rd**	∘	∘	∘	∘
5	G	G	G	G	G	G	G	G	G	G	G	**Ga**	∘	∘	∘	∘	∘	∘
6	G	G	G	G	G	G	G	G	G	G	**Gb**	∘	∘	∘	∘	∘	∘	∘
7	G	G	G	G	G	G	G	G	G	**Gc**	∘	∘	∘	∘	∘	∘	∘	∘
8	G	G	G	G	G	G	G	G	**Gd**	∘	∘	∘	∘	∘	∘	∘	∘	∘
9	B	B	B	B	B	B	B	**Ba**	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
10	B	B	B	B	B	B	**Bb**	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
11	B	B	B	B	**Bc**	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
12	B	**Bd**	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘
13	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘

FIG. 61A

Scan Pass s3 Time t1935

Line Dot	1902	1904	1906	1908	1910	1912	1914	1916	1918	1920
1	R	R	R	R	R	R	R	R	R	R
2	R	R	R	R	R	R	R	R	R	R
3	R	R	R	R	R	R	R	R	R	R
4	R	R	R	R	R	R	R	R	R	R
5	G	G	G	G	G	G	G	G	G	G
6	G	G	G	G	G	G	G	G	G	**Gb**
7	G	G	G	G	G	G	G	G	**Gc**	∘
8	G	G	G	G	G	G	G	**Gd**	∘	∘
9	B	B	B	B	B	B	**Ba**	∘	∘	∘
10	B	B	B	B	B	**Bb**	∘	∘	∘	∘
11	B	B	B	B	**Bc**	∘	∘	∘	∘	∘
12	B	**Bd**	∘	∘	∘	∘	∘	∘	∘	∘
13	∘	∘	∘	∘	∘	∘	∘	∘	∘	∘

Ra
Rb
Rc
Rd
Ga
Gb
Gc
Gd
Ba
Bb
Bc

FIG. 61B

Scan Pass s3 Time t1953

Line	1918	1920
1	R	R
2	R	R
3	R	R
4	R	R
5	G	G
6	G	G
7	G	G
8	G	G
9	B	B
10	B	B
11	B	B
12	B	**Bd**
13	∘	∘

Dot

Ra
Rb
Rc
Rd
Ga
Gb
Gc
Gd
Ba
Bb
Bc

FIG. 61C

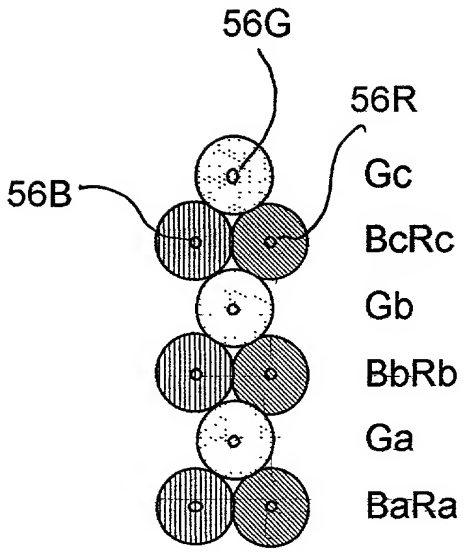


FIG. 62

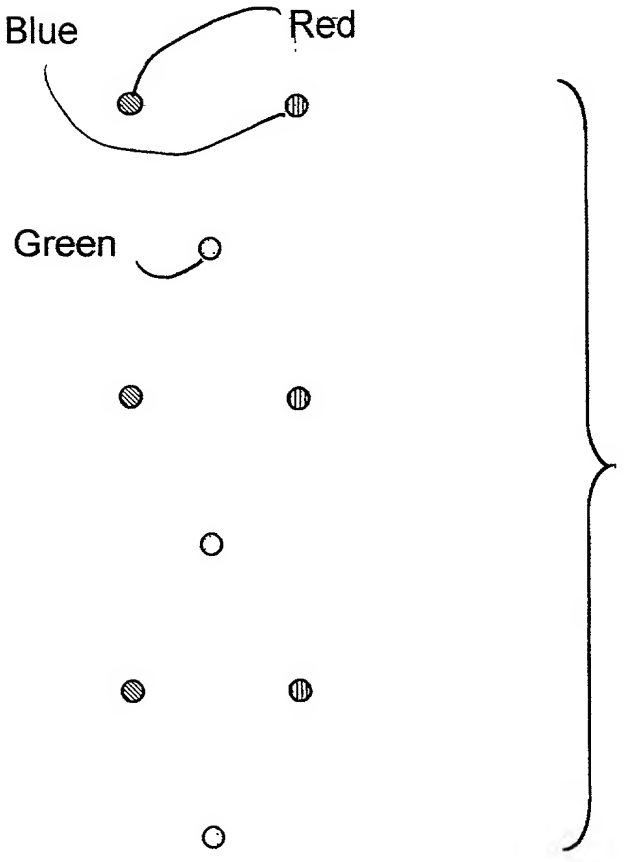
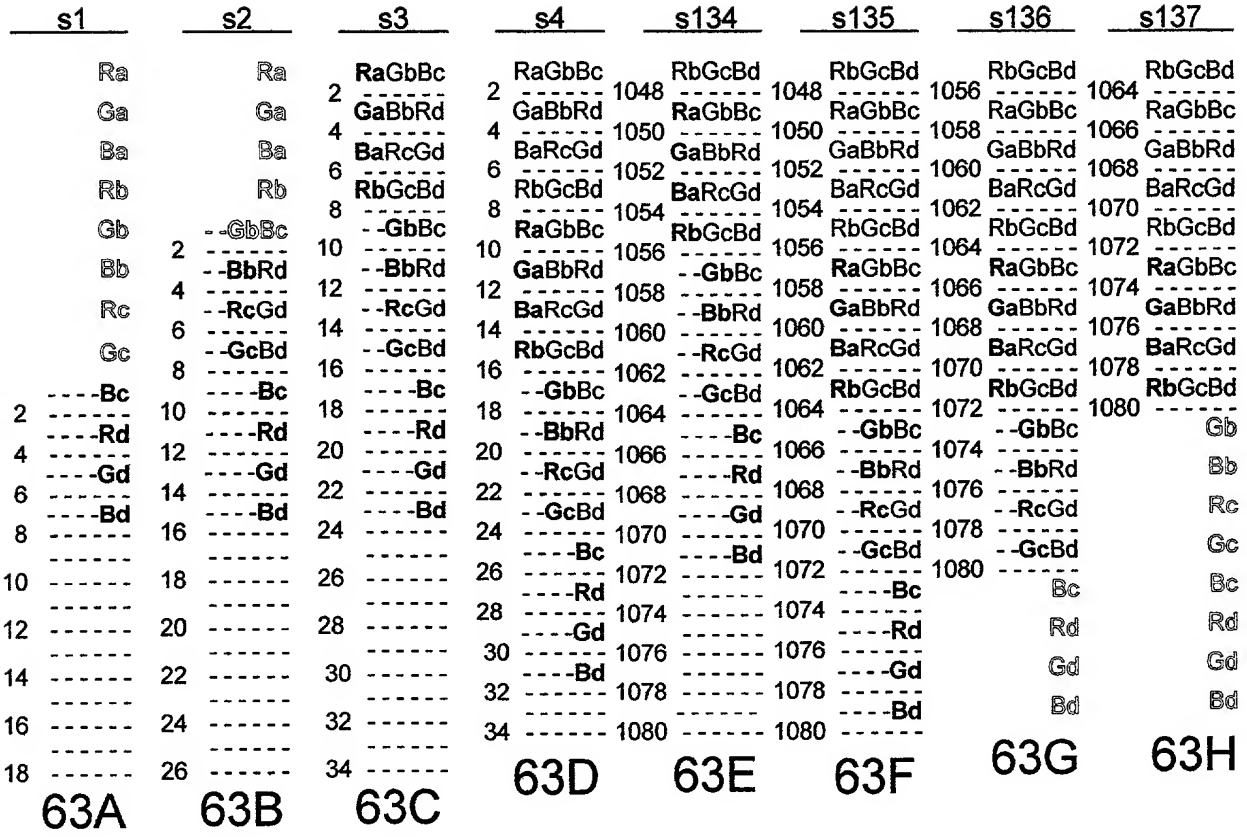
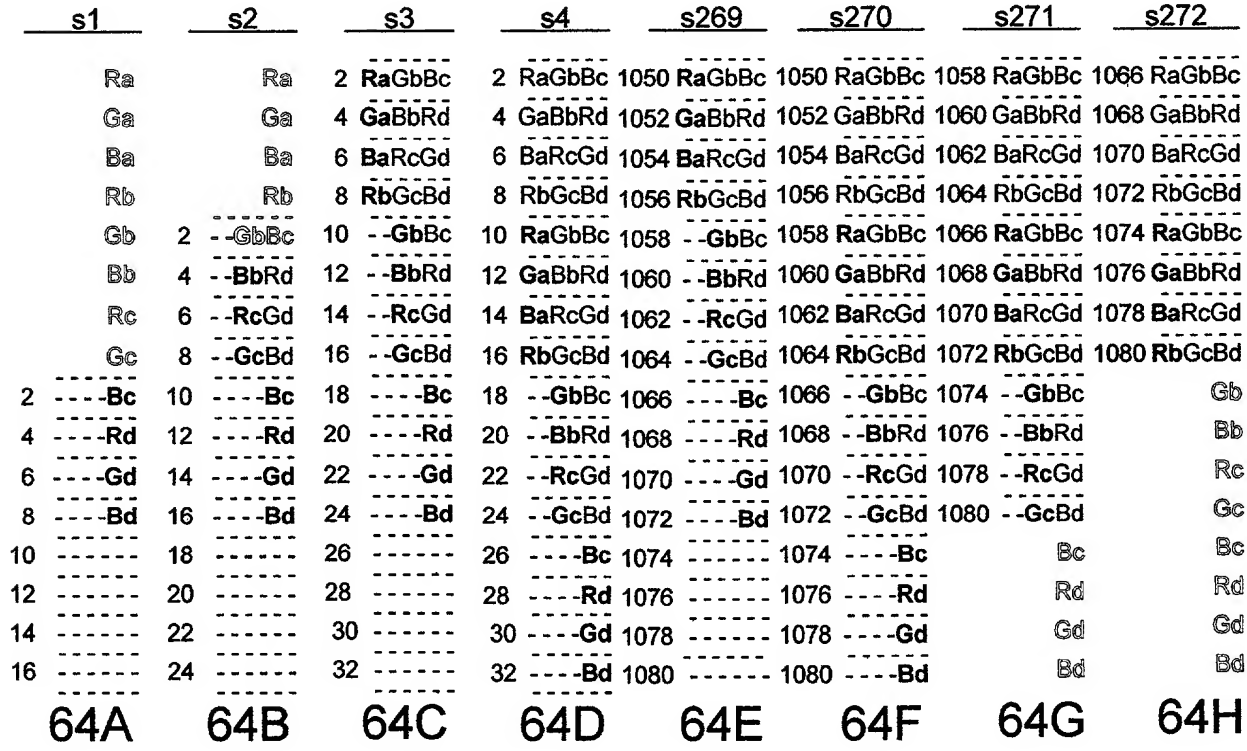


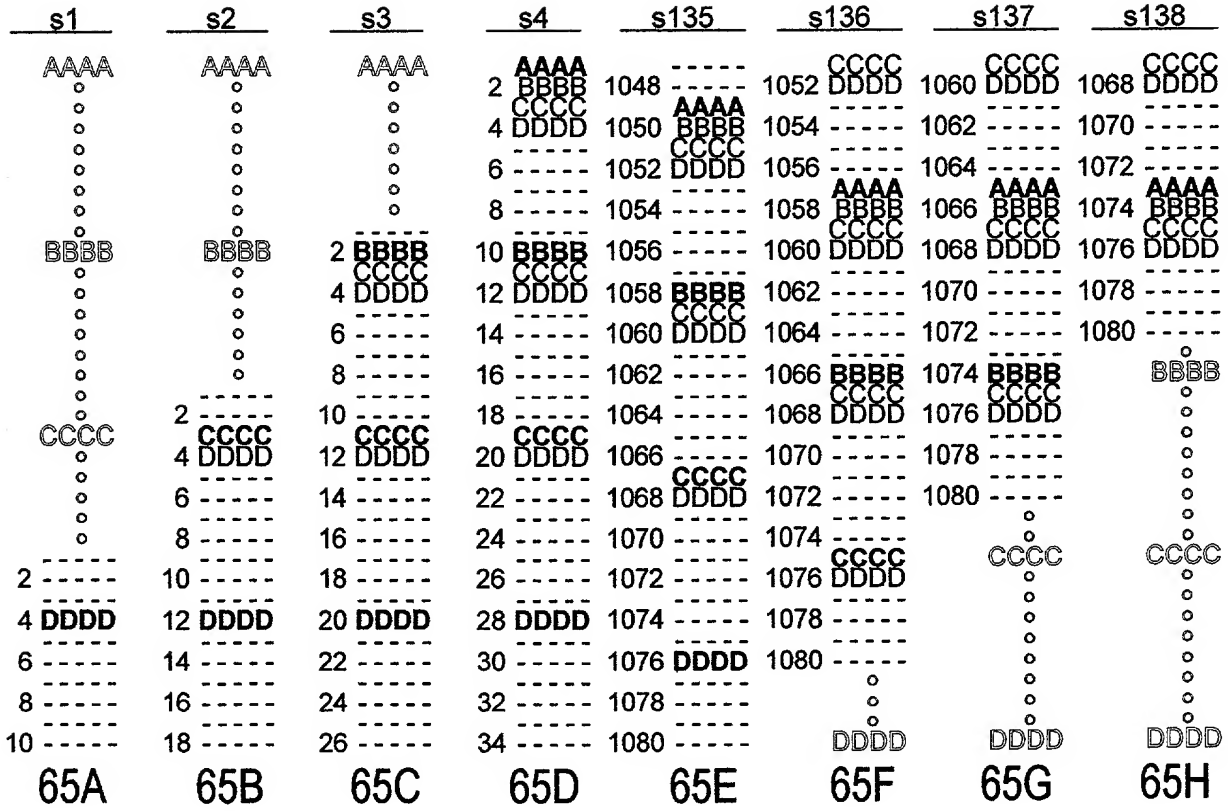
FIG. 62S



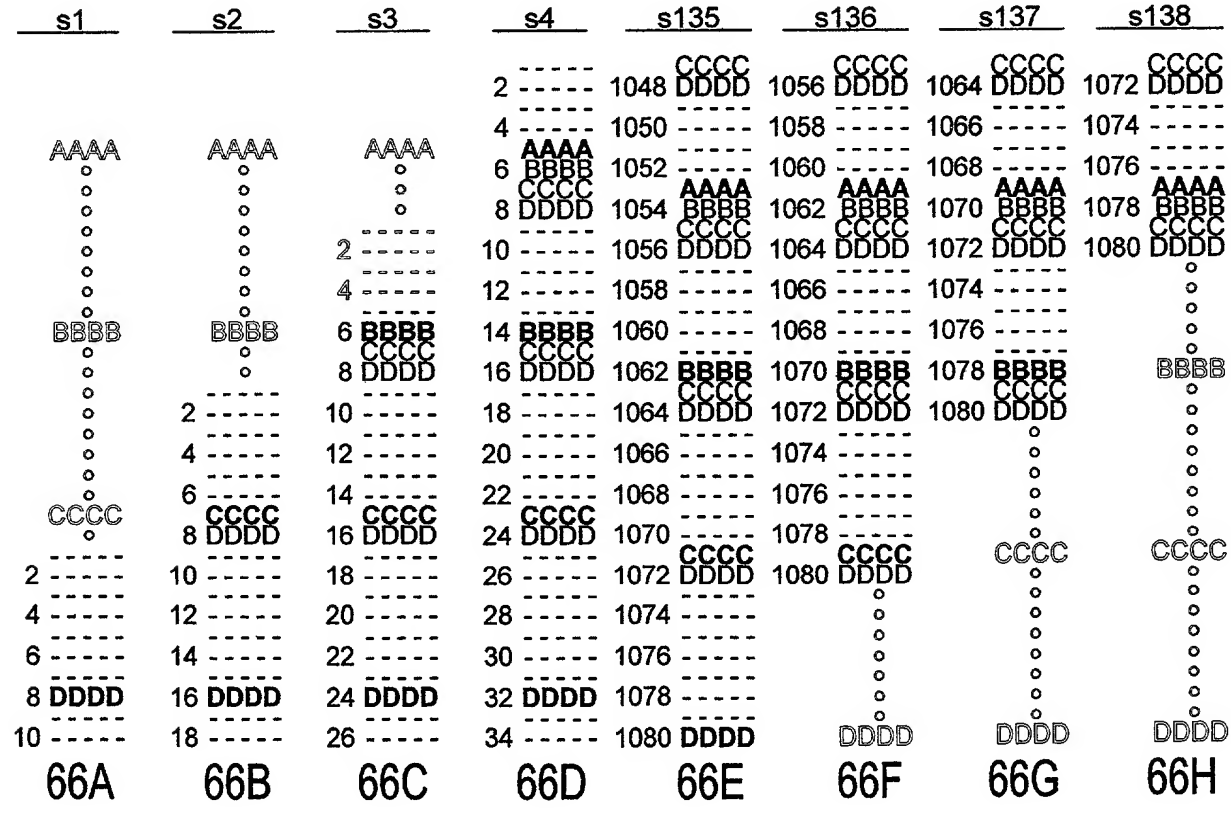
FIGs. 63A-63H



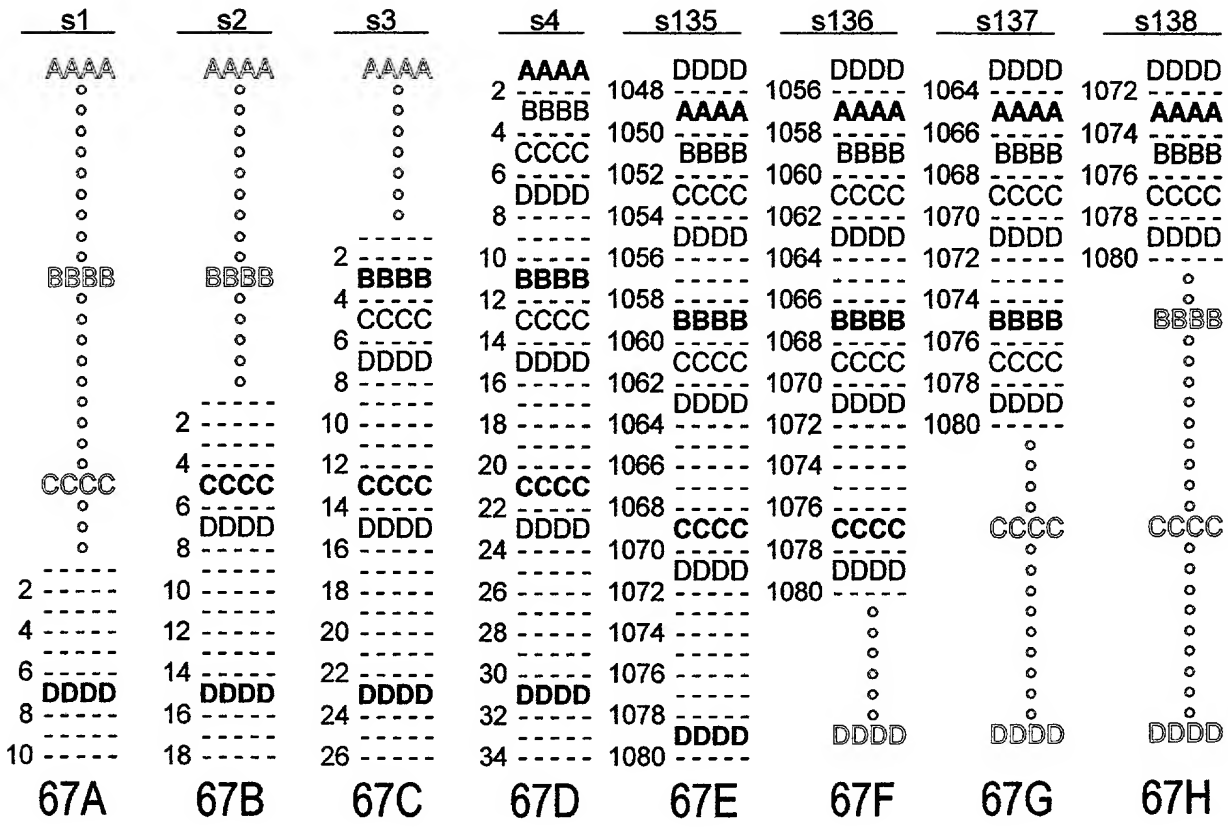
FIGs. 64A-64H



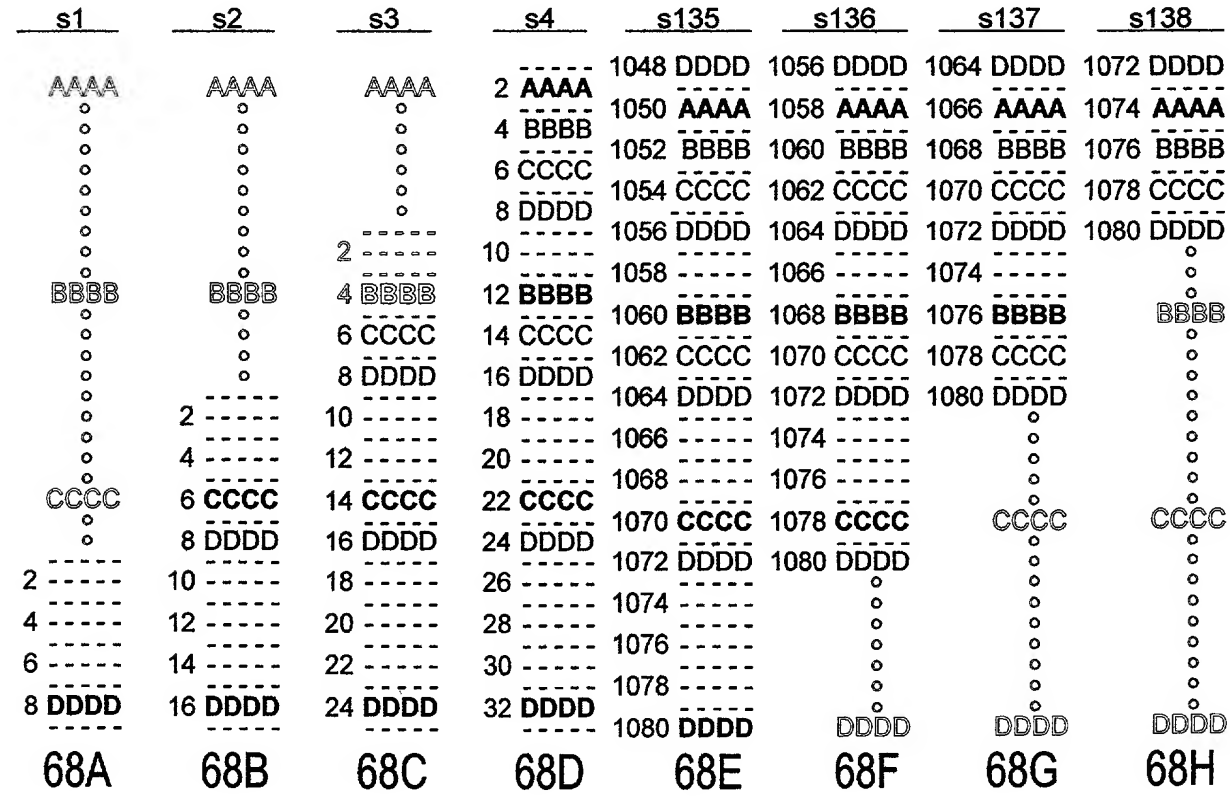
FIGs. 65A-65H



FIGs. 66A-66H



FIGs. 67A-67H



FIGs. 68A-68H

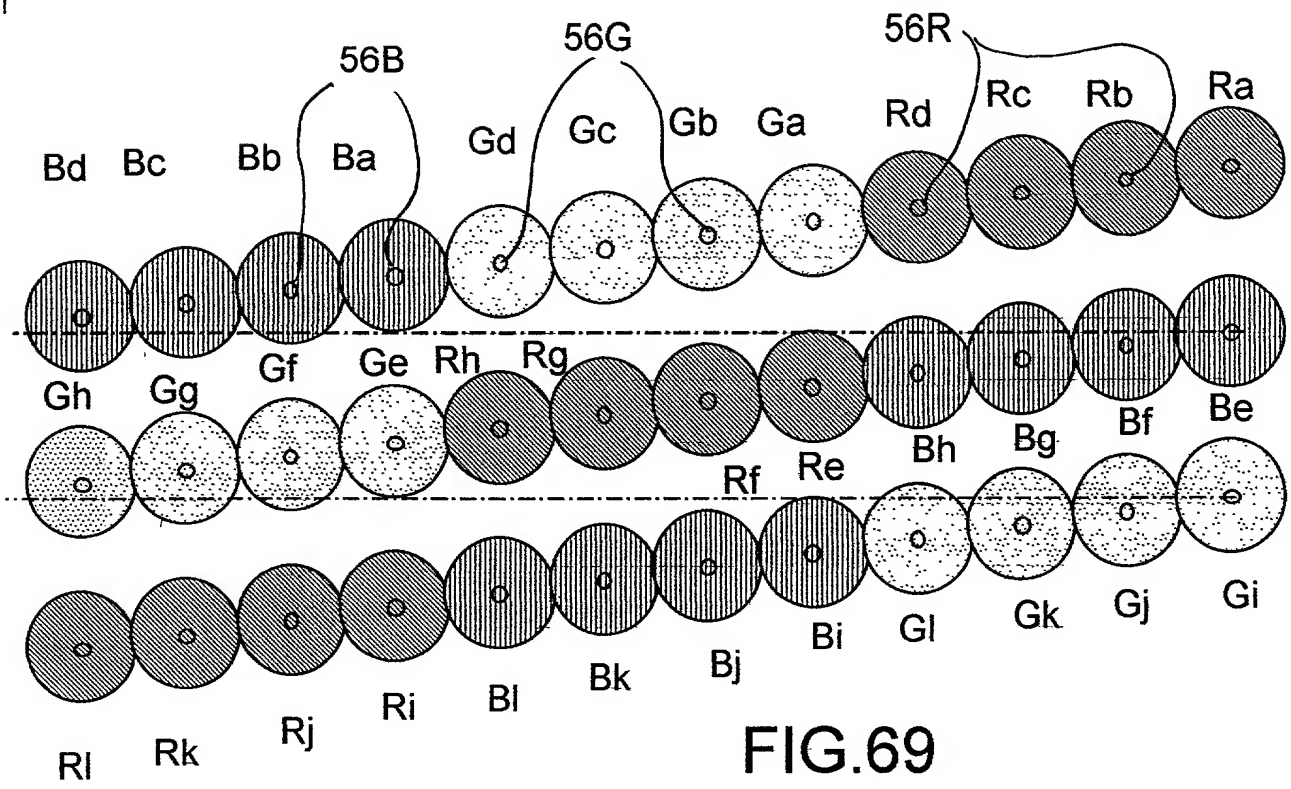
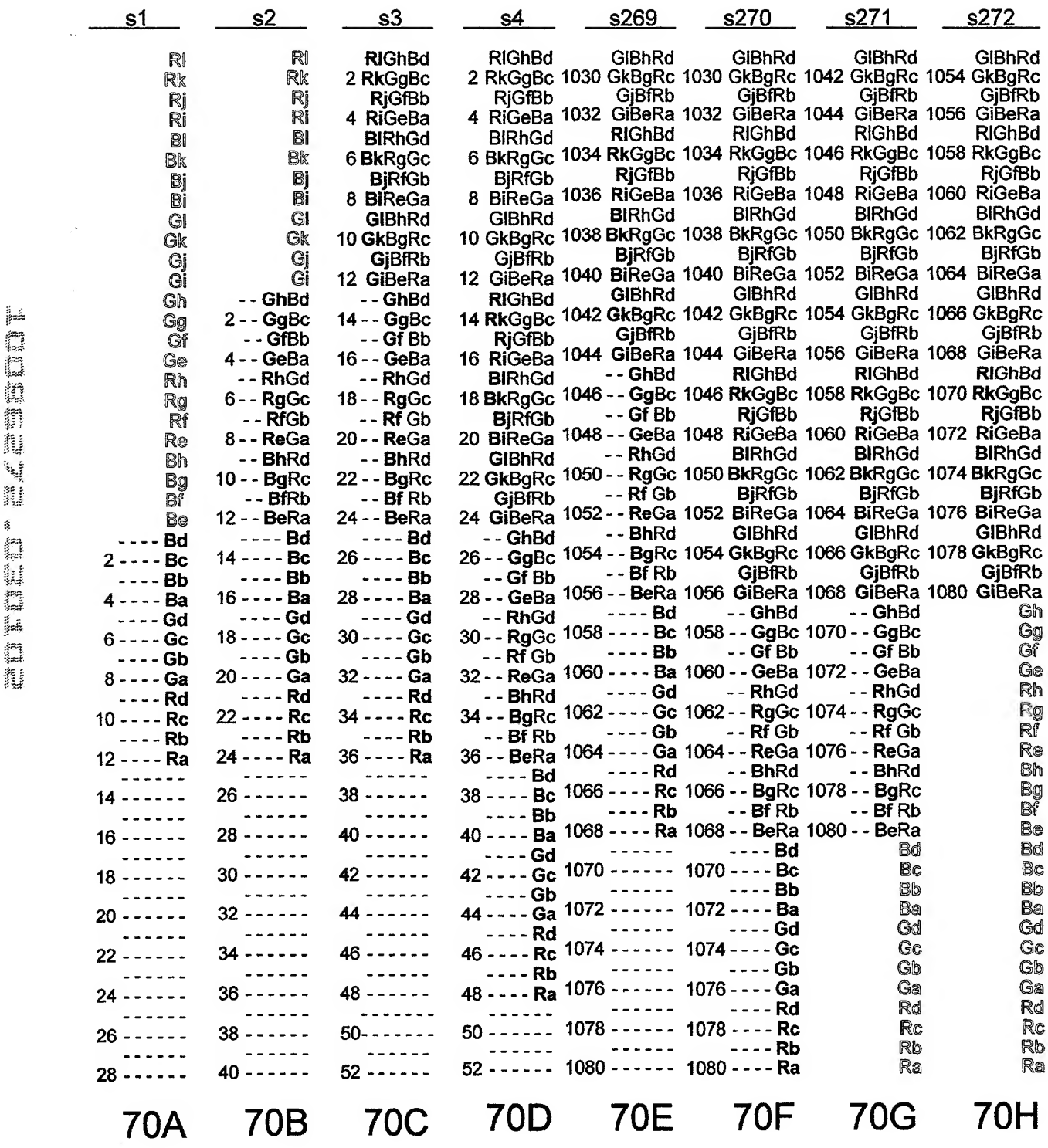

56B
56G
56R
Bd
Bc
Bb
Ba
Gd
Gc
Gb
Ga
Rd
Rc
Rb
Ra
Gh
Gg
Gf
Ge
Rh
Rg
Bh
Bg
Bf
Be
Rf
Re
Bi
Gl
Gk
Gj
Gi
Rl
Rk
Rj
Ri
Bl
Bk
Bj

FIG.69



FIGs. 70A-70H

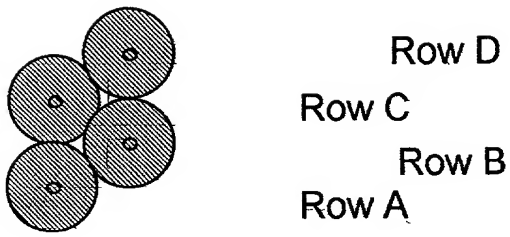


FIG. 71

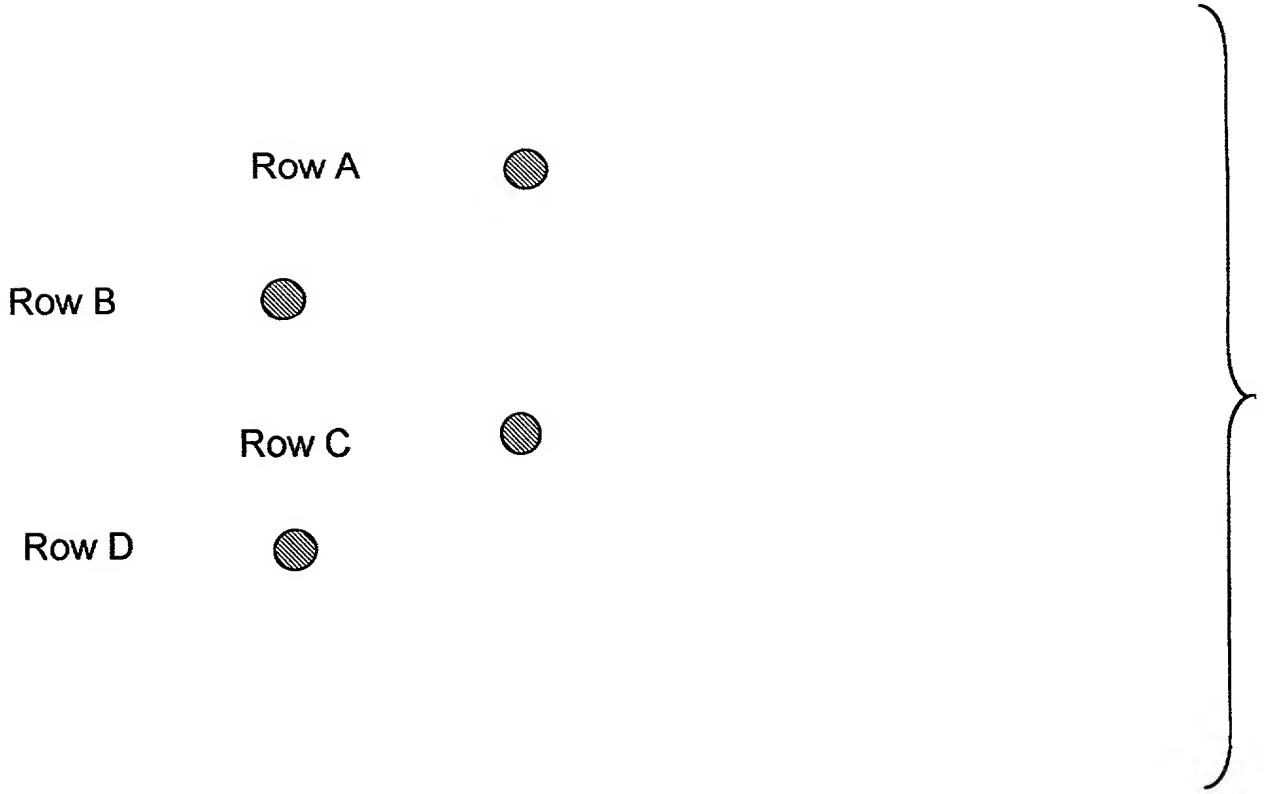


FIG. 71S

	s1		s2		s269		s270
	RGBa		RGBa		RGBc		RGBc
2	**RGBb**	2	RGBb	1072	RGBd	1072	RGBd
	RGBc		RGBc		**RGBa**		RGBa
4	**RGBd**	4	RGBd	1074	**RGBb**	1074	RGBb
	-----		**RGBa**		**RGBc**		RGBc
6	-----	6	**RGBb**	1076	**RGBd**	1076	RGBd
	-----		**RGBc**		-----		**RGBa**
8	-----	8	**RGBd**	1078	-----	1078	**RGBb**
	-----		-----		-----		**RGBc**
10	-----	10	-----	1080	-----	1080	**RGBd**
	72A		72B		72C		72D

FIGs. 72A-72D

Scan Pass s3 Time t1

Line	Dot	1		3		5
3	Xa	∘	∘	∘	∘	∘
4		∘	∘	∘	∘	∘
5		∘	∘	∘	∘	∘
6		**Xb**	∘	∘	∘	∘
7		∘	∘	∘	∘	∘
8		∘	∘	∘	∘	∘
9	Xc	∘	∘	∘	∘	∘
10		∘	∘	∘	∘	∘
11		∘	∘	∘	∘	∘
12		**Xd**	∘	∘	∘	∘
13		∘	∘	∘	∘	∘

FIG. 74A

Scan Pass s3 Time t3

Line	1		3		5		7
3	**Xa**	∘	∘	∘	∘	∘	∘
4	∘	∘	∘	∘	∘	∘	∘
5	∘	∘	∘	∘	∘	∘	∘
6	Xb	Xb	**Xb**	∘	∘	∘	∘
7	∘	∘	∘	∘	∘	∘	∘
8	∘	∘	∘	∘	∘	∘	∘
9	**Xc**	∘	∘	∘	∘	∘	∘
10	∘	∘	∘	∘	∘	∘	∘
11	∘	∘	∘	∘	∘	∘	∘
12	Xd	Xd	**Xd**	∘	∘	∘	∘
13	∘	∘	∘	∘	∘	∘	∘

FIG. 74B

Scan Pass s3 Time t1920

Line	1914		1916		1918		1920
3	Xa	Xa	Xa	Xa	**Xa**	∘	∘
4	∘	∘	∘	∘	∘	∘	∘
5	∘	∘	∘	∘	∘	∘	∘
6	Xb	Xb	Xb	Xb	Xb	Xb	**Xb**
7	∘	∘	∘	∘	∘	∘	∘
8	∘	∘	∘	∘	∘	∘	∘
9	Xc	Xc	Xc	Xc	**Xc**	∘	∘
10	∘	∘	∘	∘	∘	∘	∘
11	∘	∘	∘	∘	∘	∘	∘
12	Xd	Xd	Xd	Xd	Xd	Xd	**Xd**
13	∘	∘	∘	∘	∘	∘	∘

FIG. 74C

Scan Pass s3 Time t1924

Line	1918			1920	1922	1924
3	Xa	Xa	**Xa**			
4	∘	∘	∘			
5	∘	∘	∘			
6	Xb	Xb	Xb	Xb		
7	∘	∘	∘			
8	∘	∘	∘			
9	Xc	Xc	**Xc**			
10	∘	∘	∘			
11	∘	∘	∘			
12	Xd	Xd	Xd	Xd		
13	∘	∘	∘			

FIG. 74D

Scan Pass s1 Time t1

Line	Dot				1	3		
1					**Xa**	∘	∘	∘
2				Xb	∘	∘	∘	∘
3			Xc		∘	∘	∘	∘
4		Xd			∘	∘	∘	∘
5					∘	∘	∘	∘

FIG. 73A

Scan Pass s1 Time t4

Line	Dot			1	3	5	7	
1				Xa	Xa	Xa	**Xa**	∘ ∘ ∘
2				**Xb**	∘	∘	∘	∘ ∘ ∘
3			Xc	∘	∘	∘	∘	∘ ∘ ∘
4		Xd		∘	∘	∘	∘	∘ ∘ ∘
5				∘	∘	∘	∘	∘ ∘ ∘

FIG. 73B

Scan Pass s1 Time t7

Line	Dot		1	3	5	7	9	
1			Xa	Xa	Xa	Xa	Xa	Xa **Xa** ∘ ∘ ∘
2			Xb	Xb	Xb	**Xb**	∘	∘ ∘ ∘ ∘ ∘ ∘
3			**Xc**	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘
4		Xd	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘
5			∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘

FIG. 73C

Scan Pass s1 Time t10

Line	Dot	1	3	5	7	9	11	13	
1		Xa	Xa	Xa	Xa	Xa	Xa	Xa	**Xa** ∘ ∘ ∘
2		Xb	Xb	Xb	Xb	Xb	Xb	**Xb**	∘ ∘ ∘ ∘ ∘ ∘
3		Xc	Xc	Xc	**Xc**	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘
4		**Xd**	∘	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘
5		∘	∘	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘

FIG. 73D

Scan Pass s1 Time t1920

Line	Dot	1910	1912	1914	1916	1918	1920	
1		Xa	Xa	Xa	Xa	Xa	Xa	Xa Xa **Xa**
2		Xb	Xb	Xb	Xb	Xb	Xb	Xb Xb **Xb** ∘ ∘ ∘
3		Xc	Xc	Xc	Xc	Xc	**Xc**	∘ ∘ ∘ ∘ ∘ ∘
4		Xd	Xd	**Xd**	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘
5		∘	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘

FIG. 73E

Scan Pass s1 Time t1923

Line	1912	1914	1916	1918	1920	
1	Xa	Xa	Xa	Xa	Xa	Xa Xa **Xa**
2	Xb	Xb	Xb	Xb	Xb	Xb Xb **Xb**
3	Xc	Xc	Xc	Xc	**Xc**	∘ ∘ ∘
4	Xd	Xd	**Xd**	∘	∘	∘ ∘ ∘
5	∘	∘	∘	∘	∘	∘ ∘ ∘

FIG. 73F

Scan Pass s1 Time t1926

Line	1916	1918	1920		
1	Xa	Xa	Xa	Xa	Xa **Xa**
2	Xb	Xb	Xb	Xb	Xb Xb **Xb**
3	Xc	Xc	Xc	Xc	Xc **Xc**
4	Xd	Xd	**Xd**	∘	∘ ∘
5	∘	∘	∘	∘	∘ ∘

FIG. 73G

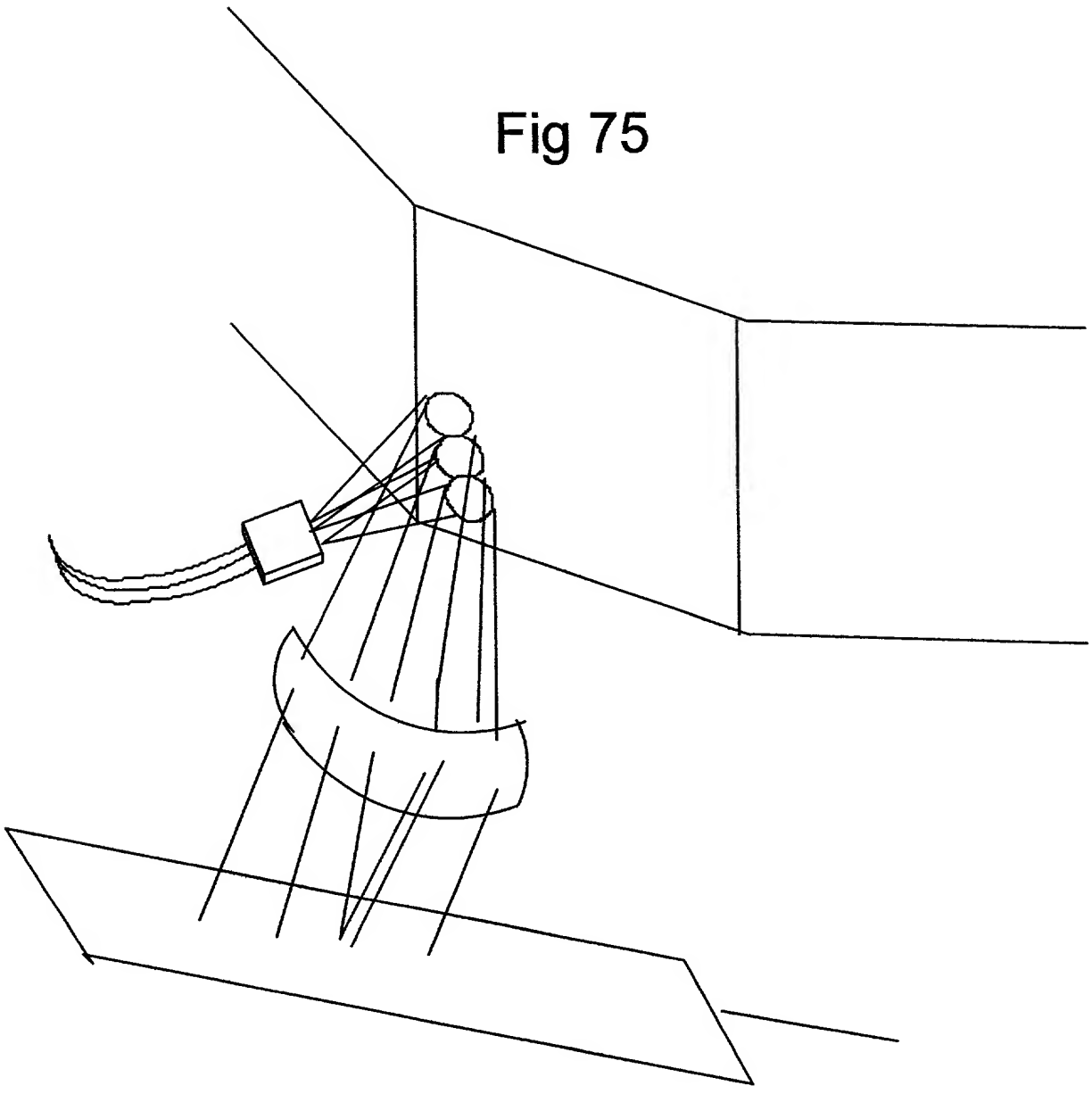
Scan Pass s1 Time t1929

Line	1918	1920			
1	Xa	Xa	Xa	Xa	**Xa**
2	Xb	Xb	Xb	Xb	**Xb**
3	Xc	Xc	Xc	Xc	
4	Xd	Xd	**Xd**		
5	∘	∘	∘		

FIG. 73H

scanned as received

Fig 75



Scanned with CamScanner

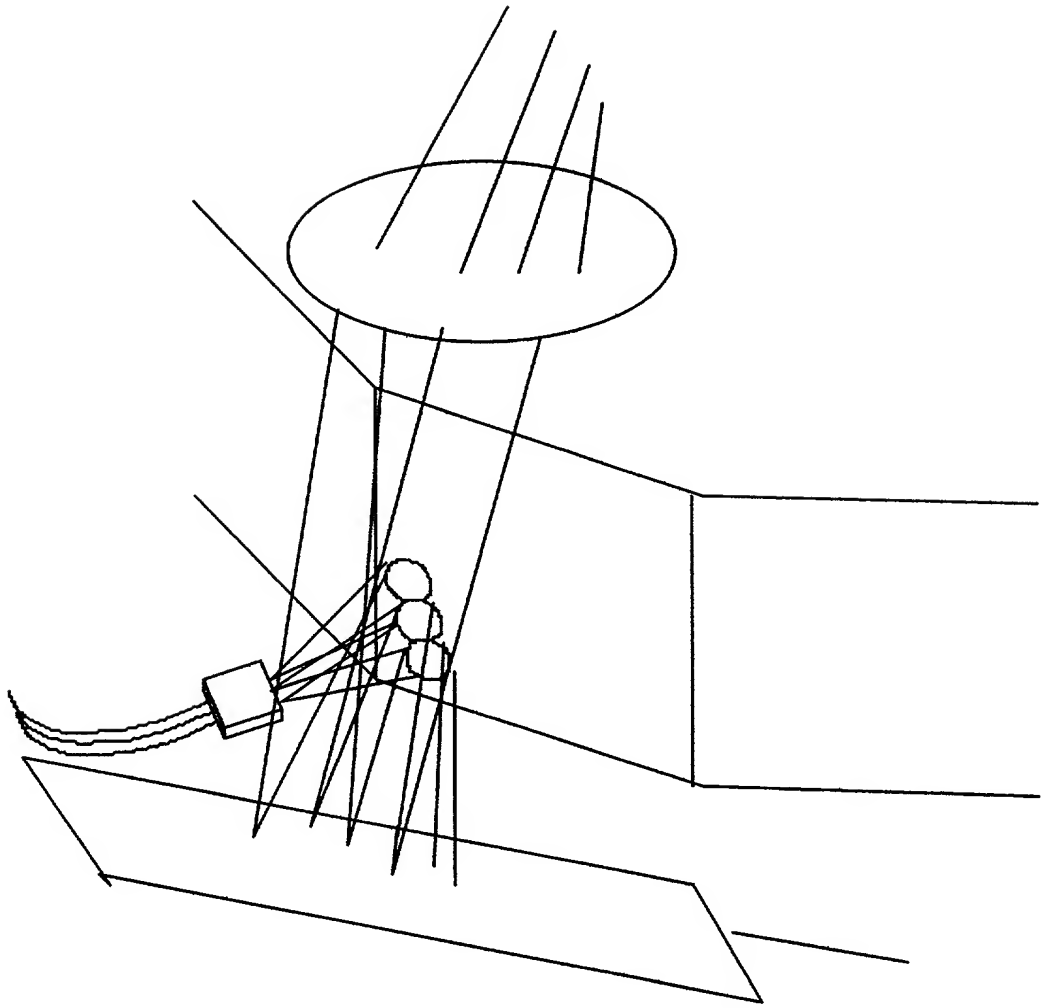


Fig 76

Replacement Sheet

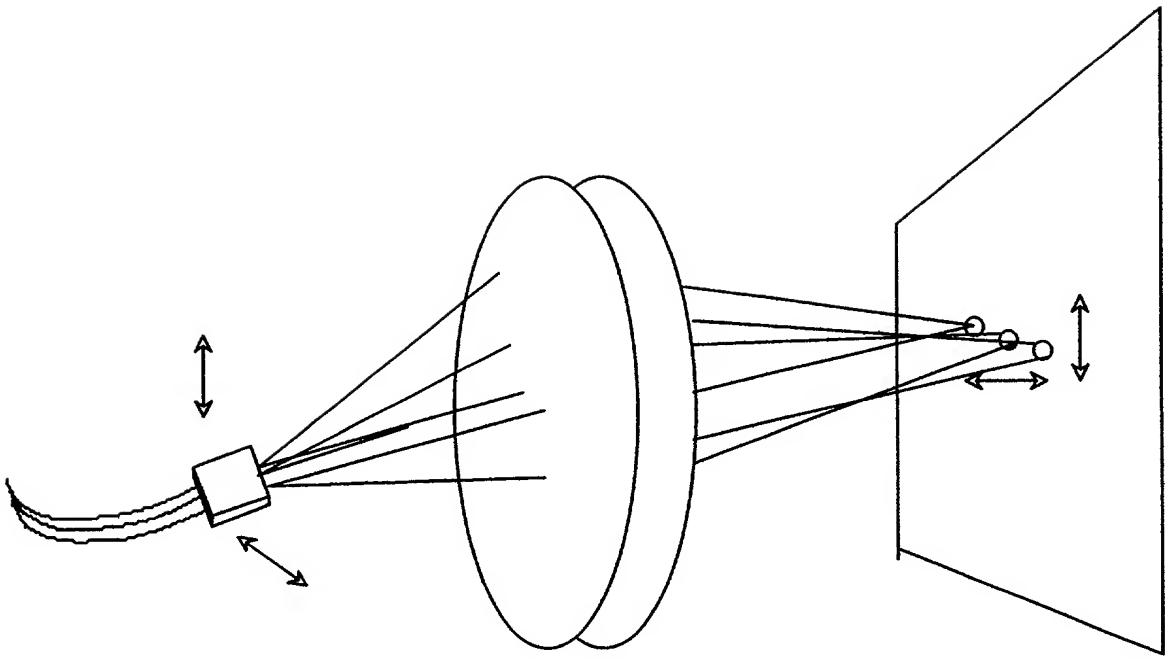


Fig 77

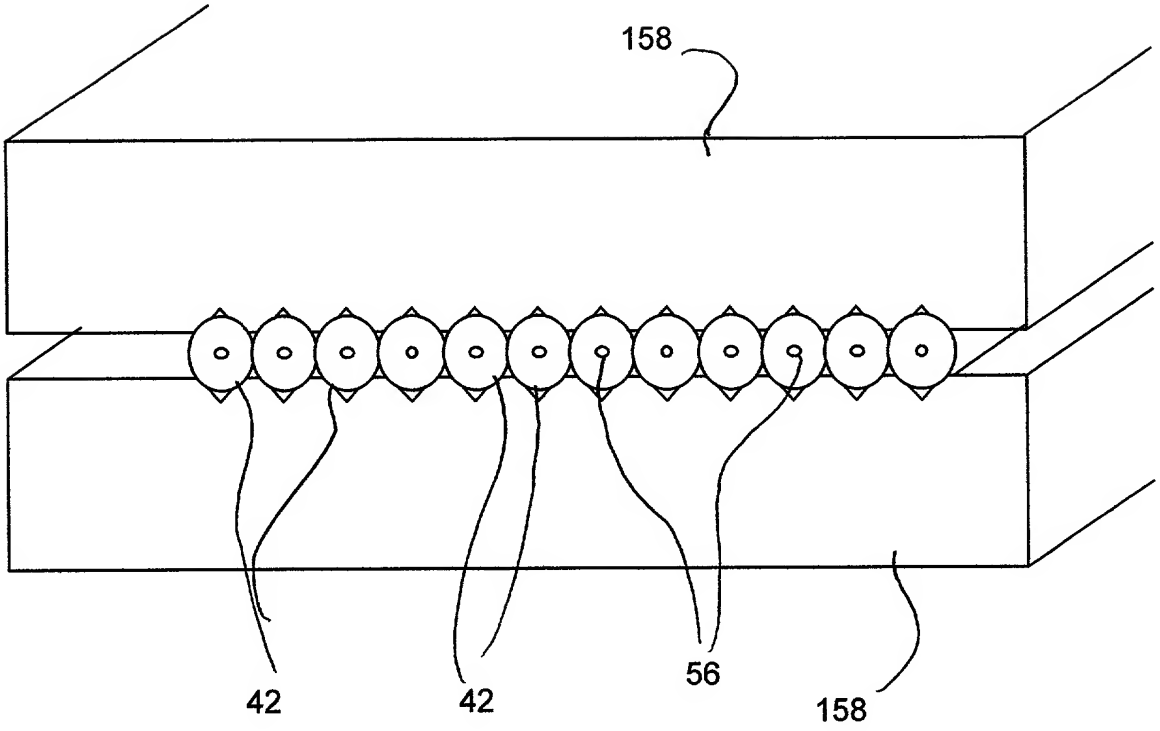
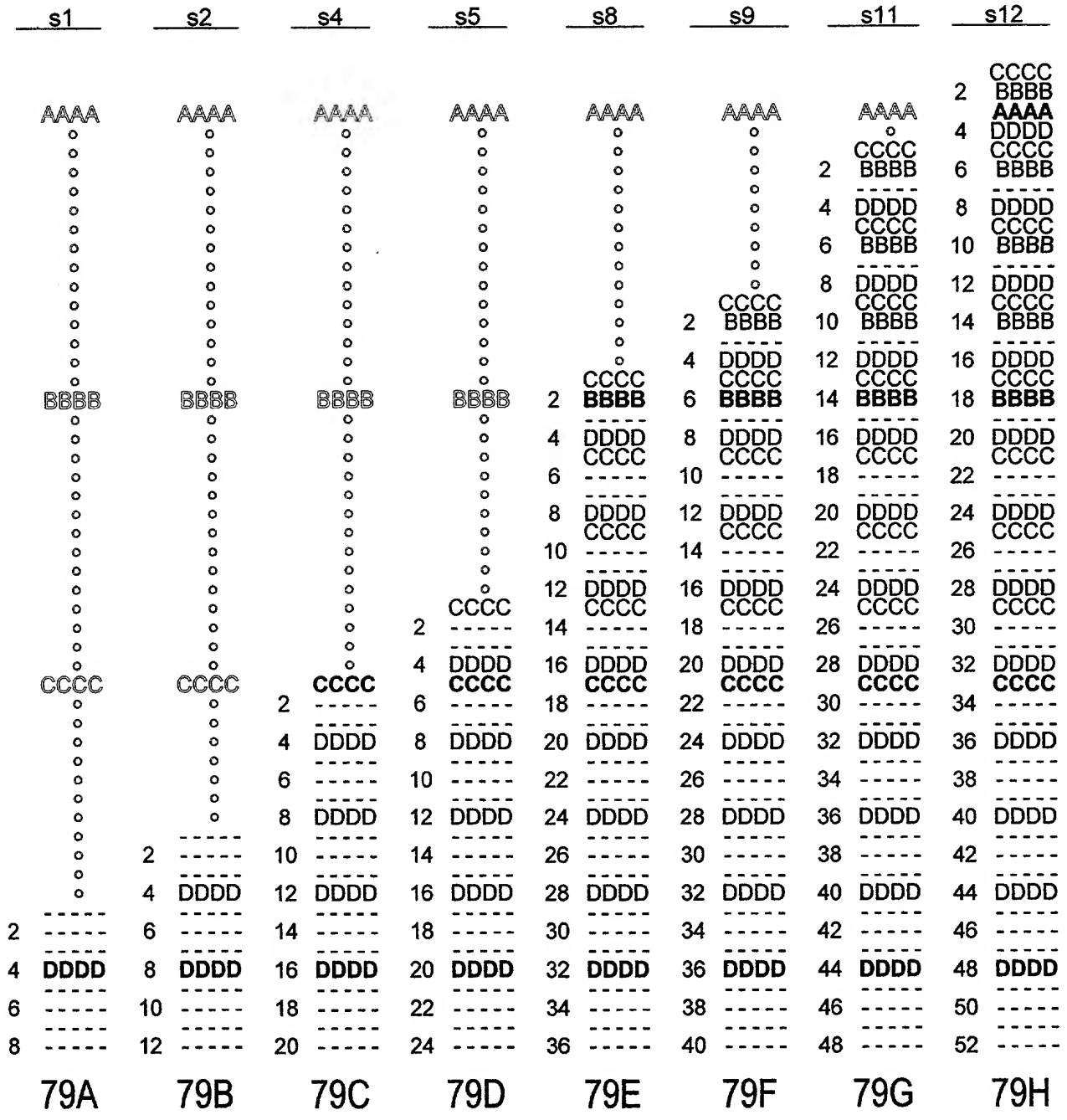
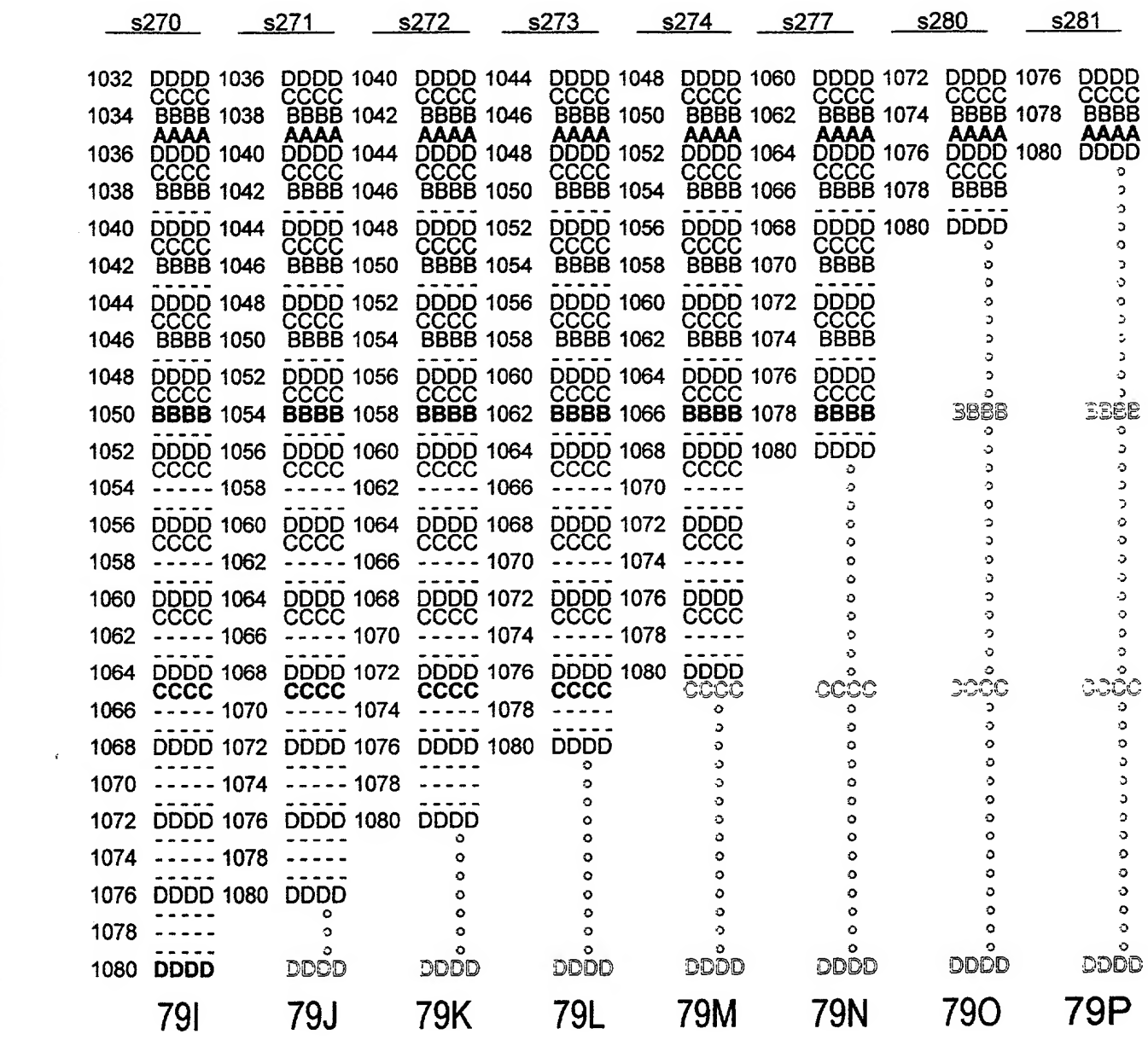


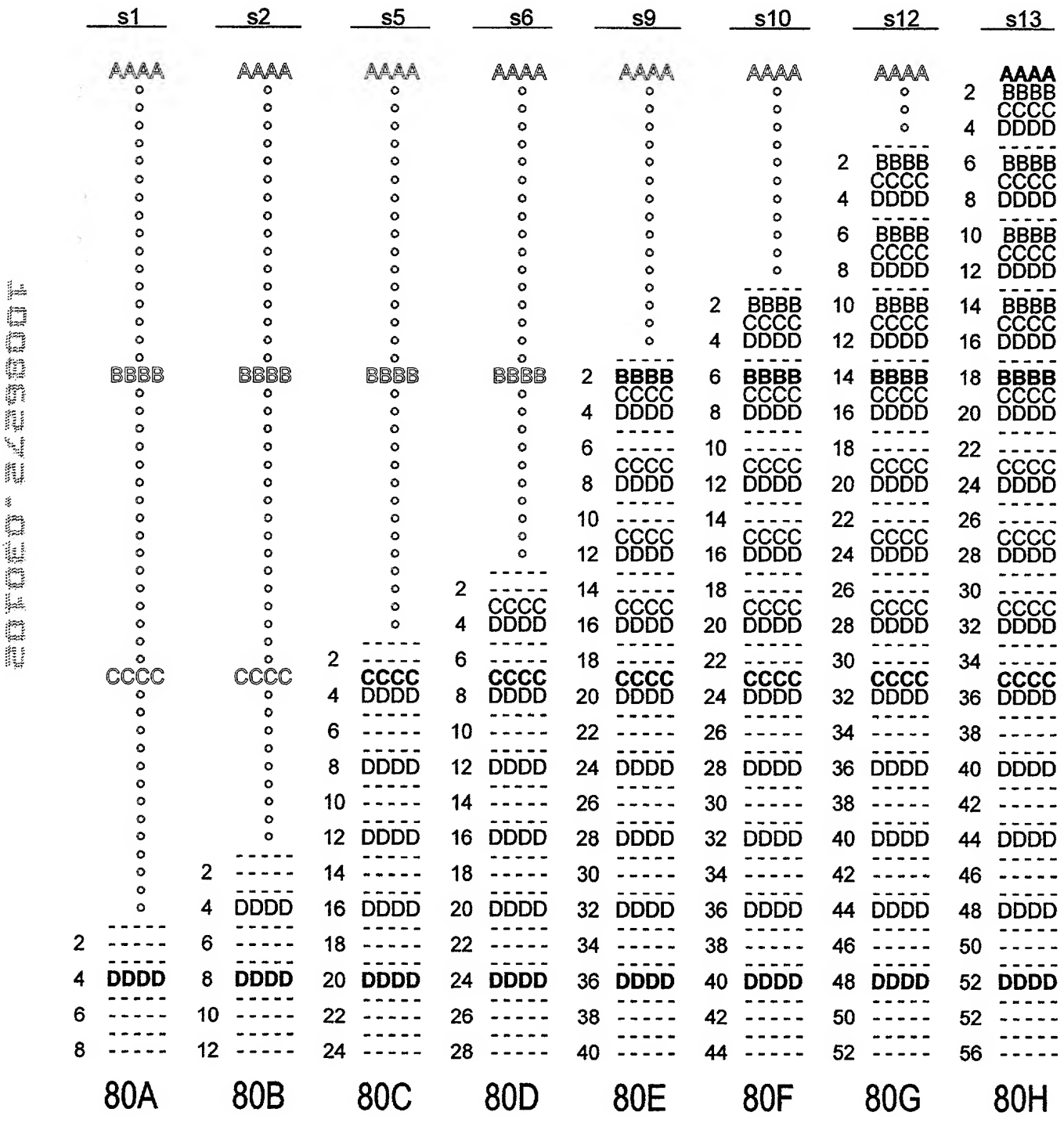
Fig 78


s1
s2
s4
s5
s8
s9
s11
s12
AAAA
BBBB
CCCC
DDDD
79A
79B
79C
79D
79E
79F
79G
79H

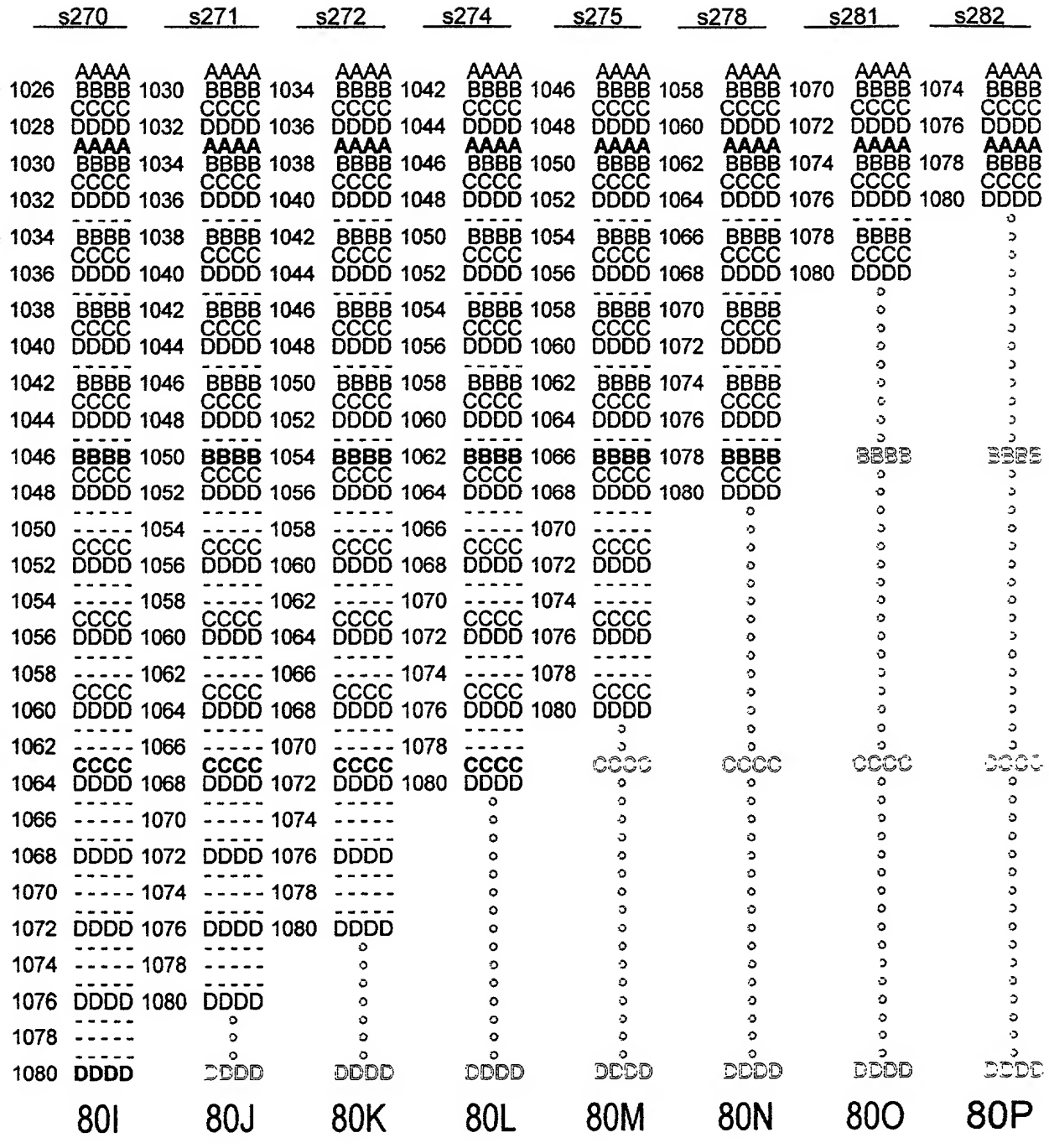
FIGs. 79A-79H


s270
s271
s272
s273
s274
s277
s280
s281
79I
79J
79K
79L
79M
79N
79O
79P

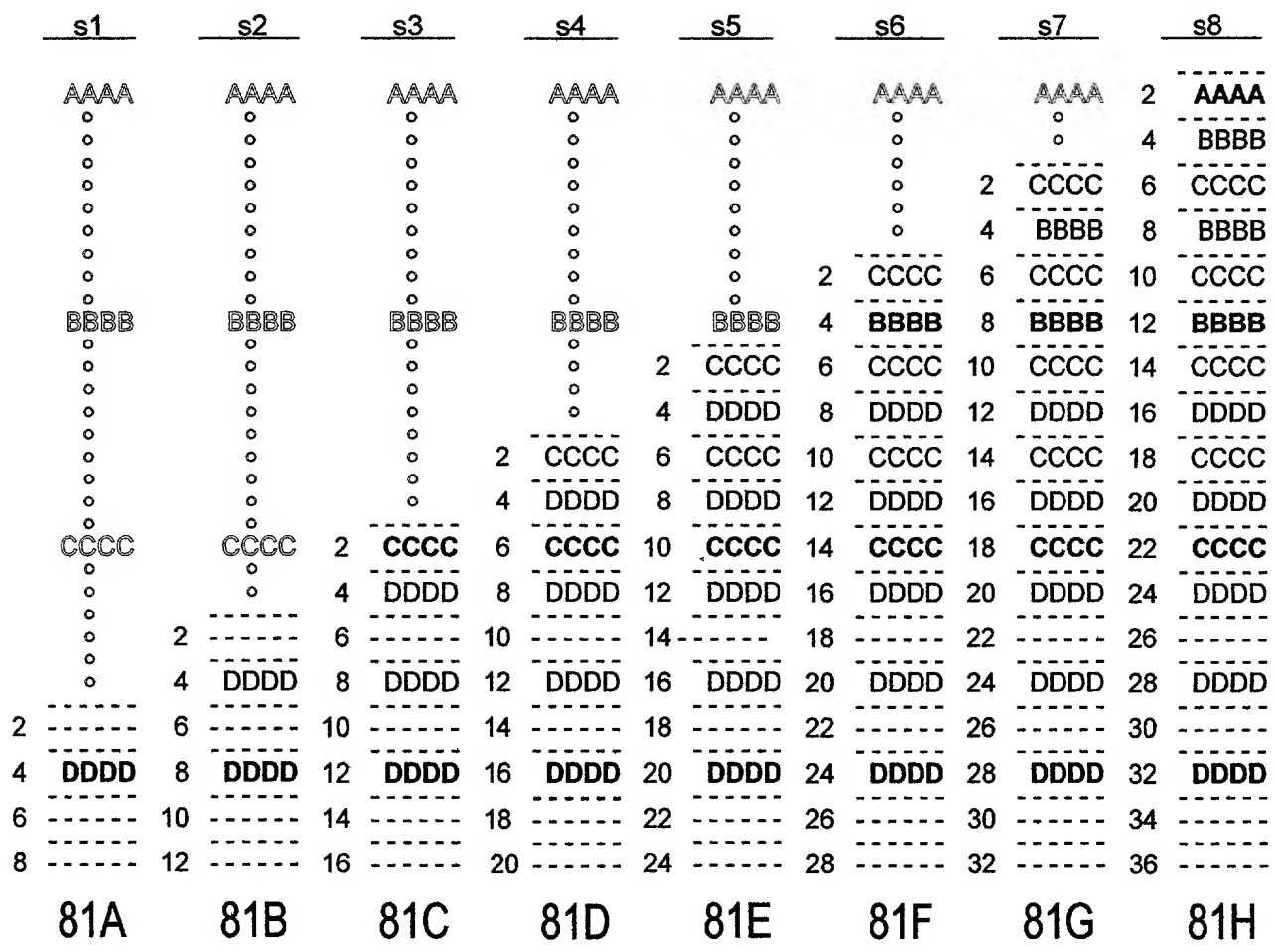
FIGs. 79I-79P


s1
s2
s5
s6
s9
s10
s12
s13
AAAA
BBBB
CCCC
DDDD
80A
80B
80C
80D
80E
80F
80G
80H

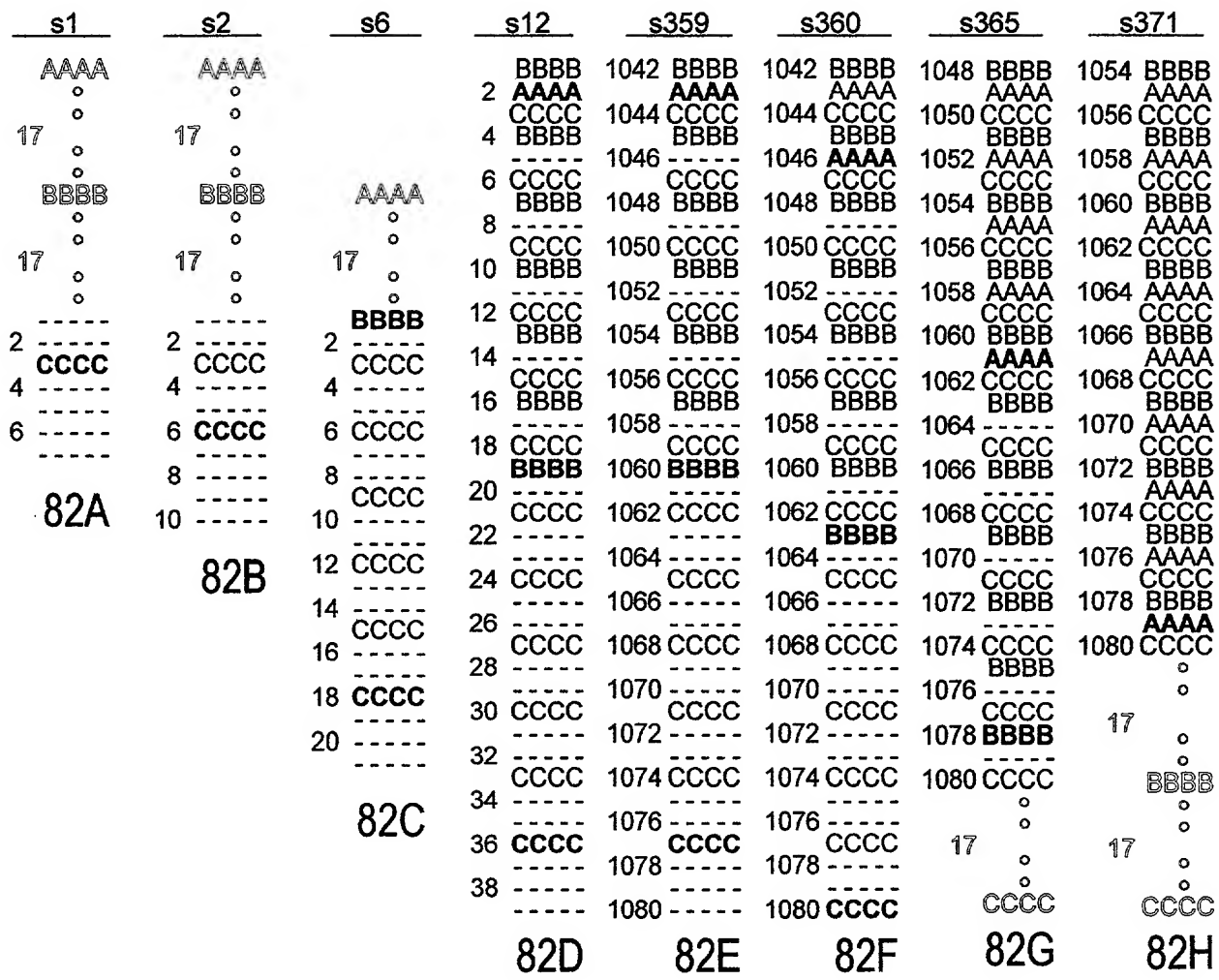
FIGs. 80A-80H


s270
s271
s272
s274
s275
s278
s281
s282
AAAA
BBBB
CCCC
DDDD
1026
1028
1030
1032
1034
1036
1038
1040
1042
1044
1046
1048
1050
1052
1054
1056
1058
1060
1062
1064
1066
1068
1070
1072
1074
1076
1078
1080
80I
80J
80K
80L
80M
80N
80O
80P

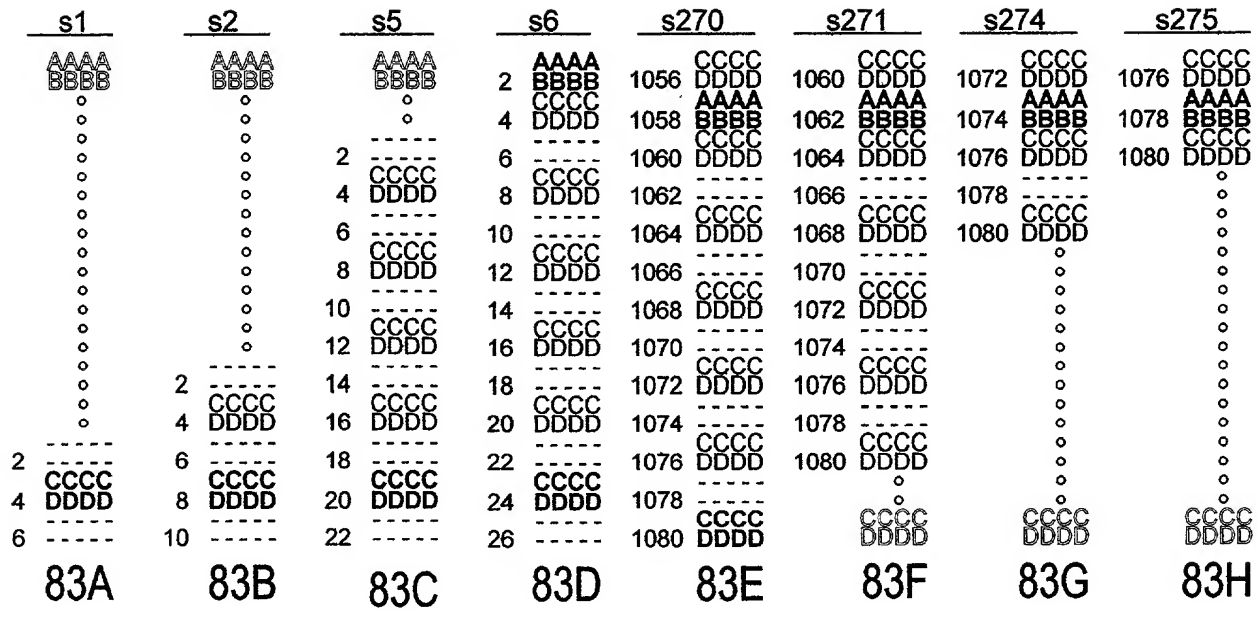
FIGs. 80I-80P


s1
s2
s3
s4
s5
s6
s7
s8
AAAA
BBBB
CCCC
DDDD
81A
81B
81C
81D
81E
81F
81G
81H

FIGs. 81A-81H


s1
AAAA
17
BBBB
17
2
CCCC
4
6
82A
s2
AAAA
17
BBBB
17
2
CCCC
4
6
CCCC
8
10
82B
s6
AAAA
17
BBBB
2
CCCC
4
6
CCCC
8
CCCC
10
12
CCCC
14
CCCC
16
18
CCCC
20
82C
s12
BBBB
2
AAAA
CCCC
4
BBBB
6
CCCC
BBBB
8
CCCC
10
BBBB
12
CCCC
BBBB
14
CCCC
16
BBBB
18
CCCC
BBBB
20
CCCC
22
24
CCCC
26
CCCC
28
30
CCCC
32
CCCC
34
36
CCCC
38
82D
s359
1042 BBBB
AAAA
1044 CCCC
BBBB
1046
CCCC
1048 BBBB
1050 CCCC
BBBB
1052
CCCC
1054 BBBB
1056 CCCC
BBBB
1058
CCCC
1060 BBBB
1062 CCCC
1064
CCCC
1066
1068 CCCC
1070
CCCC
1072
1074 CCCC
1076
CCCC
1078
1080
82E
s360
1042 BBBB
AAAA
1044 CCCC
BBBB
1046 AAAA
CCCC
1048 BBBB
1050 CCCC
BBBB
1052
CCCC
1054 BBBB
1056 CCCC
BBBB
1058
CCCC
1060 BBBB
1062 CCCC
BBBB
1064
CCCC
1066
1068 CCCC
1070
CCCC
1072
1074 CCCC
1076
CCCC
1078
1080 CCCC
82F
s365
1048 BBBB
AAAA
1050 CCCC
BBBB
1052 AAAA
CCCC
1054 BBBB
AAAA
1056 CCCC
BBBB
1058 AAAA
CCCC
1060 BBBB
AAAA
1062 CCCC
BBBB
1064
CCCC
1066 BBBB
1068 CCCC
BBBB
1070
CCCC
1072 BBBB
1074 CCCC
BBBB
1076
CCCC
1078 BBBB
1080 CCCC
17
CCCC
82G
s371
1054 BBBB
AAAA
1056 CCCC
BBBB
1058 AAAA
CCCC
1060 BBBB
AAAA
1062 CCCC
BBBB
1064 AAAA
CCCC
1066 BBBB
AAAA
1068 CCCC
BBBB
1070 AAAA
CCCC
1072 BBBB
AAAA
1074 CCCC
BBBB
1076 AAAA
CCCC
1078 BBBB
AAAA
1080 CCCC
17
BBBB
17
CCCC
82H

FIGs. 82A-82H



FIGs. 83A-83H

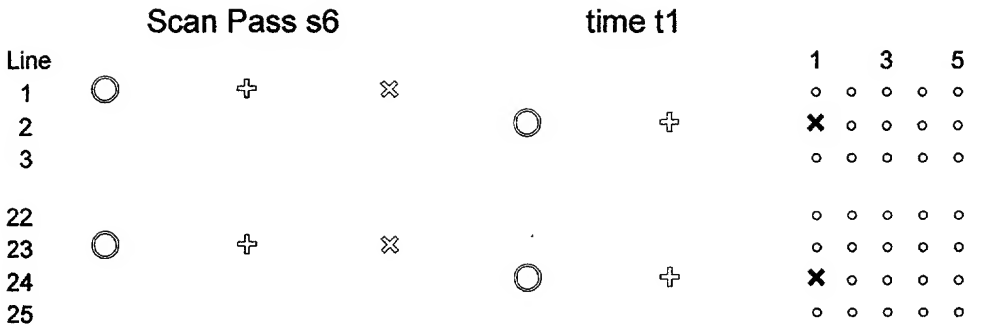


FIG. 84A

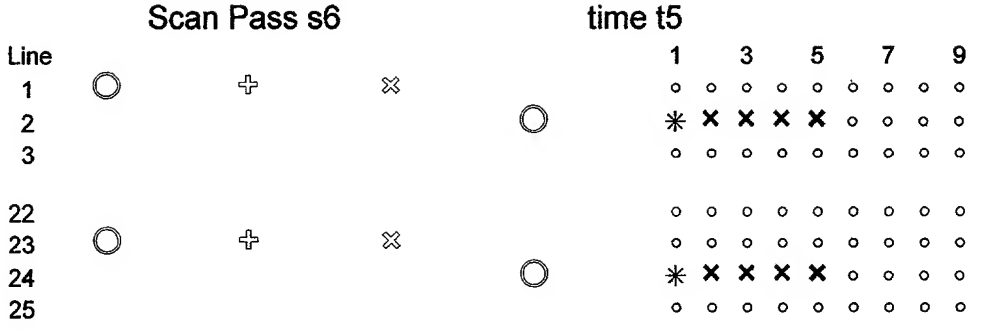


FIG. 84B

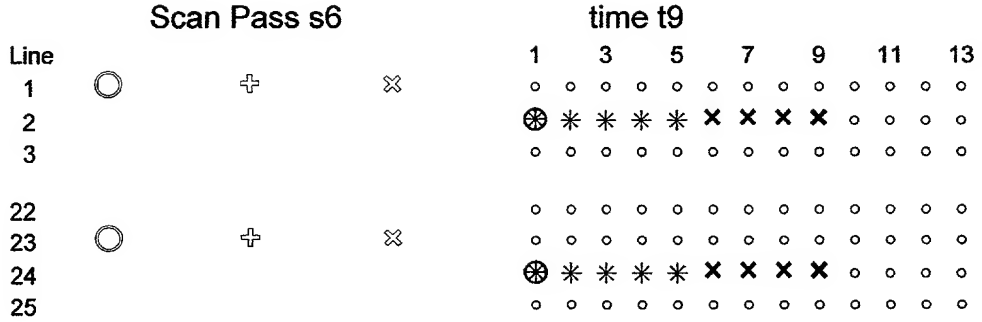


FIG. 84C

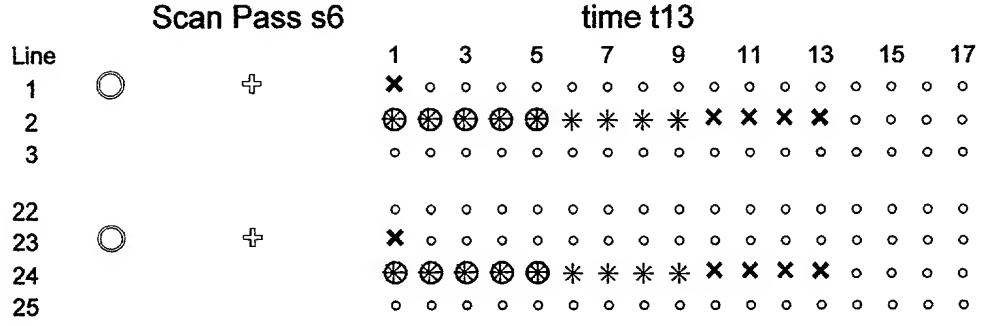


FIG. 84D

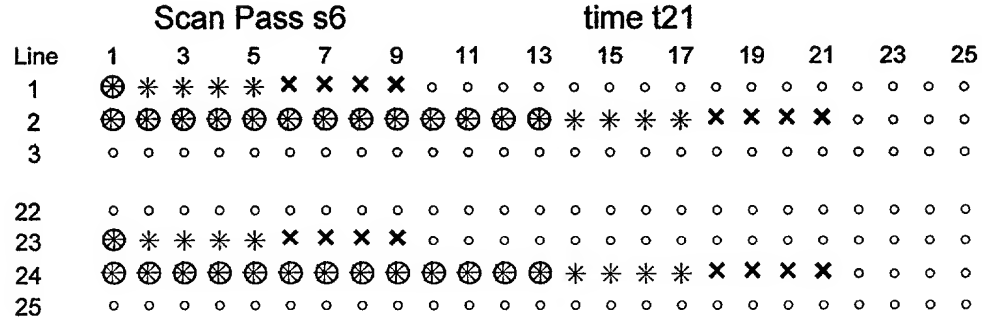


FIG. 84E

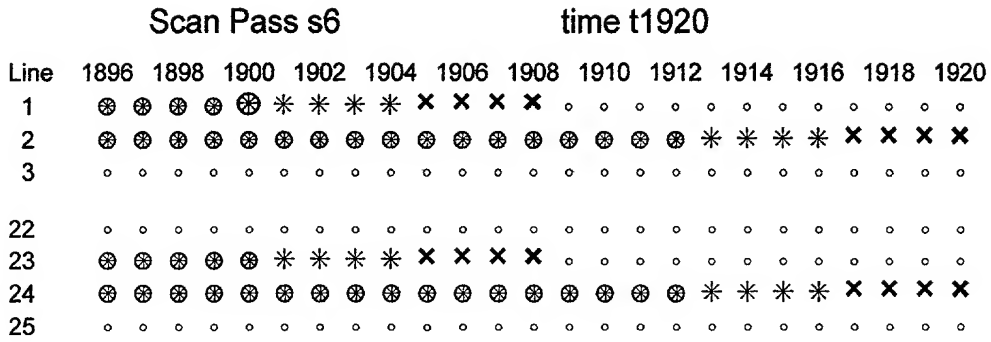


FIG. 84F

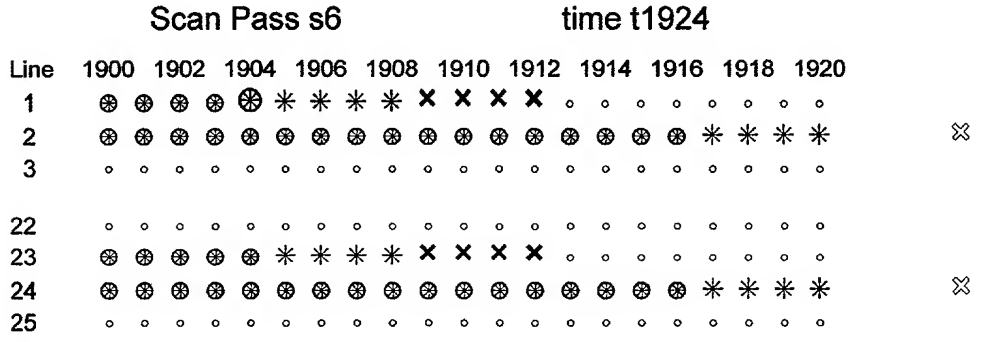


FIG. 84G

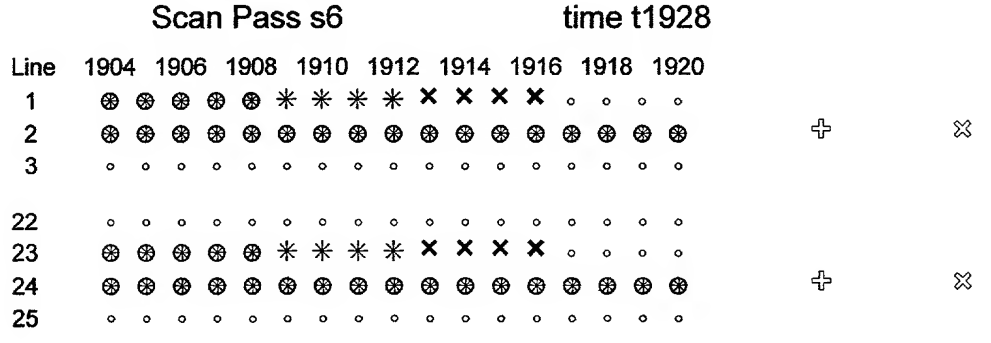


FIG. 84H

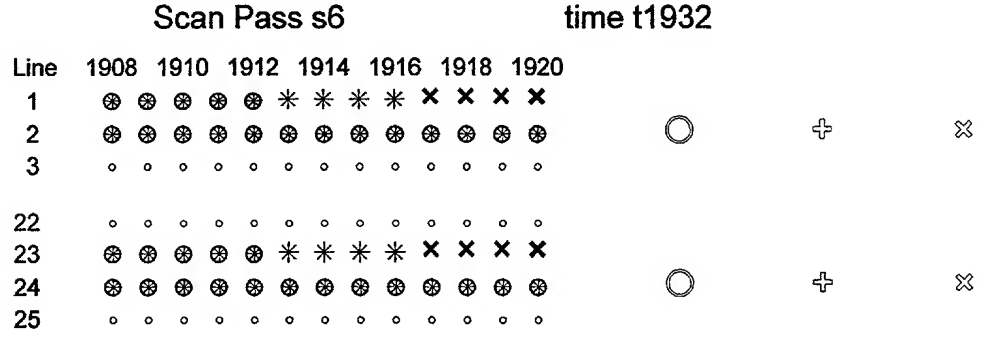


FIG. 84I

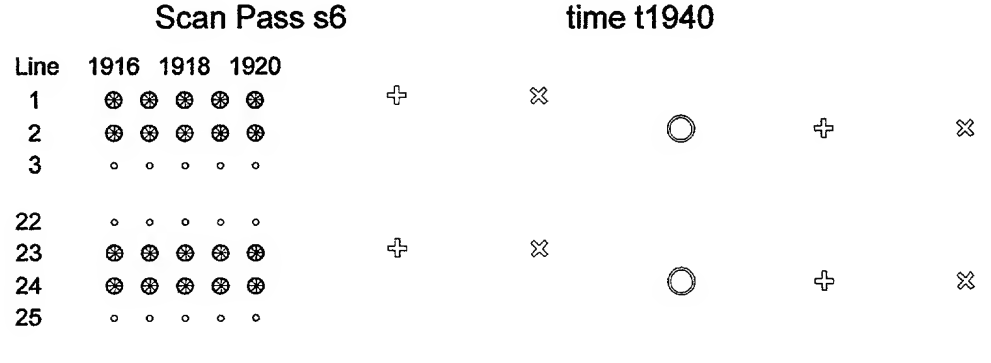
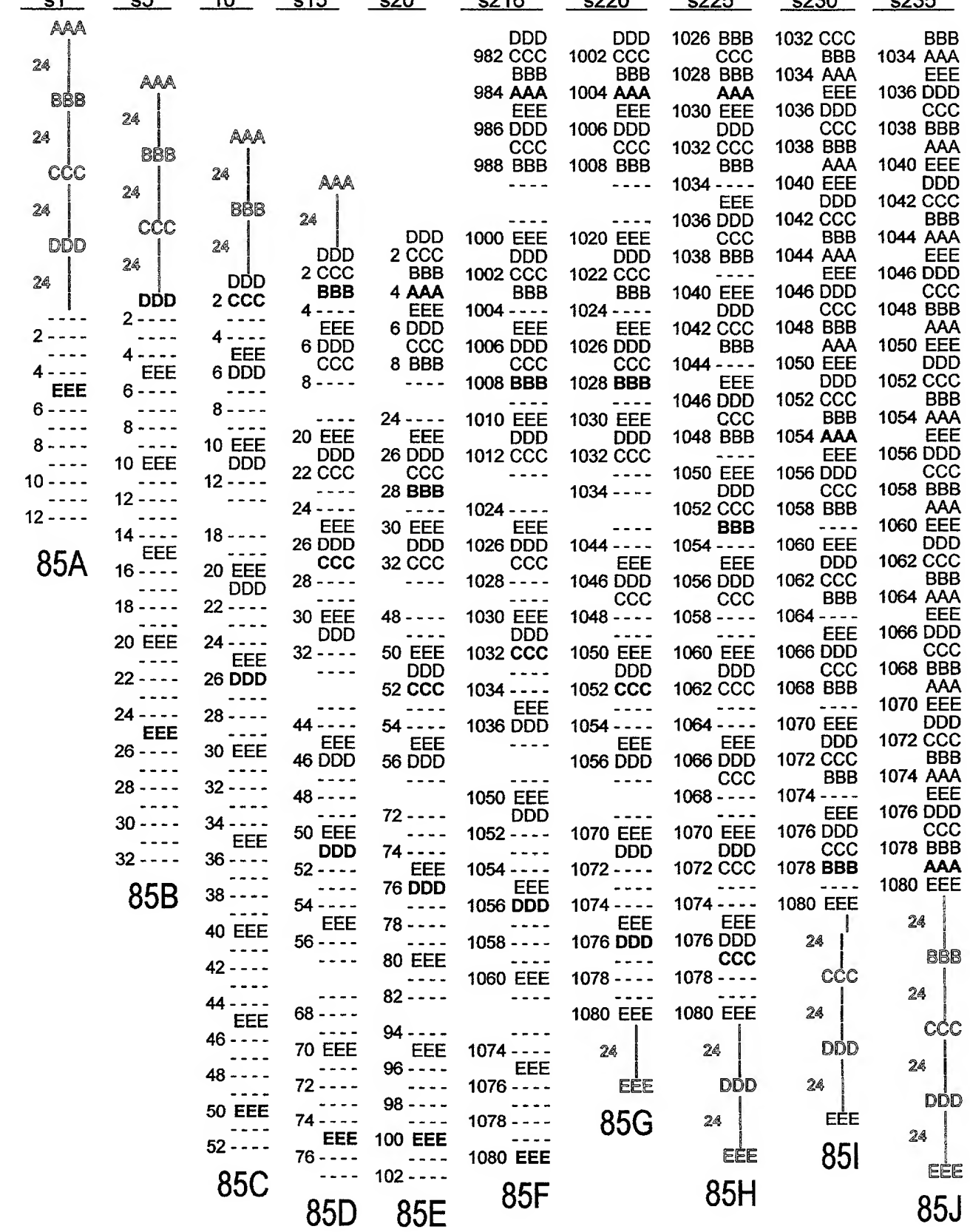
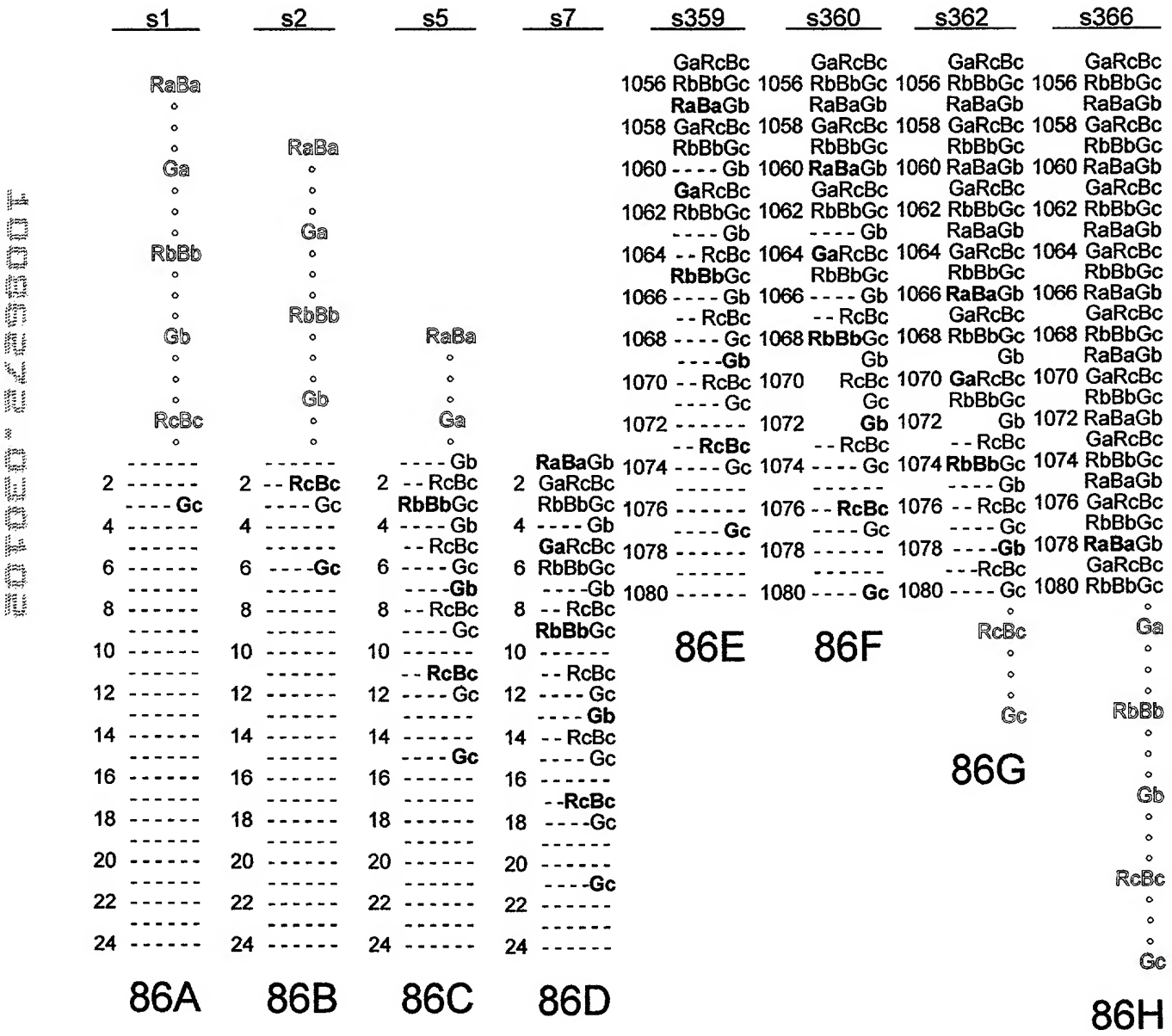


FIG. 84J

Replacement Sheet



FIGs. 85A-85J


s1
s2
s5
s7
s359
s360
s362
s366
RaBa
Ga
RbBb
Gb
RcBc
GaRcBc
RbBbGc
RaBaGb
GaRcBc
RbBbGc
RaBaGb
GaRcBc
RbBbGc
RaBaGb

Scan Pass s7 Time t1

Line	Dot	1	3	5	7	9
1	Ra	**Ba** G	G	G	G	G G G G
2		X	X	X	X	X X X X X
3		X	X	X	X	X X X X X
4		G	G	G	G	G G G G G
5	Ga	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
6		X	X	X	X	X X X X X
7		G	G	G	G	G G G G G
8		RB	RB	RB	RB	RB RB RB RB RB
9	Rb	**Bb** G	G	G	G	G G G G G
10		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
11		RB	RB	RB	RB	RB RB RB RB RB
12		G	G	G	G	G G G G G
13	Gb	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
14		RB	RB	RB	RB	RB RB RB RB RB
15		G	G	G	G	G G G G G
16		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
17	Rc	**Bc** ∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
18		G	G	G	G	G G G G G
19		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
20		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
21	Gc	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
22		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘

FIG. 87A

Scan Pass s7 Time t4

Line	Dot	1	3	5	7	9
1	Ra	BG	BG	**Ba** G	G	G G G G
2		X	X	X	X	X X X X X
3		X	X	X	X	X X X X X
4		G	G	G	G	G G G G G
5	Ga	**Ga** ∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
6		X	X	X	X	X X X X X
7		G	G	G	G	G G G G G
8		RB	RB	RB	RB	RB RB RB RB RB
9	Rb	BG	BG	**Bb** G	G	G G G G
10		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
11		RB	RB	RB	RB	RB RB RB RB RB
12		G	G	G	G	G G G G G
13	Gb	**Gb** ∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
14		RB	RB	RB	RB	RB RB RB RB RB
15		G	G	G	G	G G G G G
16		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
17	Rc	Bc	Bc	Bc **Bc** ∘	∘	∘ ∘ ∘ ∘
18		G	G	G	G	G G G G G
19		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
20		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
21	Gc	**Gc** ∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘
22		∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘

FIG. 87B

Scan Pass s7 Time t7

Line	1	3	5	7	9	11	13
1	**Rx** BG	BG	BG	BG	BG	**Ba** G	G G G G G G
2	X	X	X	X	X	X X X X X X X	
3	X	X	X	X	X	X X X X X X X	
4	G	G	G	G	G	G G G G G G G	
5	Ga	Ga	Ga	**Ga** ∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	
6	X	X	X	X	X	X X X X X X X	
7	G	G	G	G	G	G G G G G G G	
8	RB	RB	RB	RB	RB	RB RB RB RB RB RB RB	
9	**Rx** BG	BG	BG	BG	BG	**Bb** G	G G G G G
10	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	
11	RB	RB	RB	RB	RB	RB RB RB RB RB RB RB	
12	G	G	G	G	G	G G G G G G G	
13	Gb	Gb	Gb	**Gb** ∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	
14	RB	RB	RB	RB	RB	RB RB RB RB RB RB RB	
15	G	G	G	G	G	G G G G G G G	
16	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	
17	**RB** Bc	Bc	Bc	Bc	Bc	**Bc** ∘	∘ ∘ ∘ ∘ ∘ ∘
18	G	G	G	G	G	G G G G G G G	
19	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	
20	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	
21	Gc	Gc	Gc	**Gc** ∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	
22	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘	

FIG. 87C

Scan Pass s7 Time t13

Line	1	3	5	7	9	11	13	15
1	Rx	Rx	Rx	Rx	Rx	Rx **Rx** BG	BG	BG BG **Ba** G G
2	X	X	X	X	X	X X X X X X X X X		
3	X	X	X	X	X	X X X X X X X X X		
4	G	G	G	G	G	G G G G G G G G G		
5	Ga	Ga	Ga	Ga	Ga	Ga Ga Ga **Ga** ∘	∘	∘ ∘ ∘
6	X	X	X	X	X	X X X X X X X X X		
7	G	G	G	G	G	G G G G G G G G G		
8	RB	RB	RB	RB	RB	RB RB RB RB RB RB RB RB RB		
9	Rx	Rx	Rx	Rx	Rx	Rx **Rx** BG	BG	BG BG **Bb** G G
10	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘		
11	RB	RB	RB	RB	RB	RB RB RB RB RB RB RB RB RB		
12	G	G	G	G	G	G G G G G G G G G		
13	Gb	Gb	Gb	Gb	Gb	Gb Gb Gb Gb **Gb** ∘	∘	∘ ∘ ∘
14	RB	RB	RB	RB	RB	RB RB RB RB RB RB RB RB RB		
15	G	G	G	G	G	G G G G G G G G G		
16	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘		
17	RB	RB	RB	RB	RB	RB **RB** Bc	Bc	Bc Bc **Bc** ∘ ∘
18	G	G	G	G	G	G G G G G G G G G		
19	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘		
20	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘		
21	Gc	Gc	Gc	Gc	Gc	Gc Gc Gc Gc **Gc** ∘	∘	∘ ∘ ∘
22	∘	∘	∘	∘	∘	∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘		

FIG. 87D

Patent Application Publication

Scan Pass s7 Time t1920

Line	1906	1908	1910	1912	1914	1916	1918	1920	
1	RX	RX	RX	RX	RX	RX	RX	RX	Ba
2	X	X	X	X	X	X	X	X	
3	X	X	X	X	X	X	X	X	
4	G	G	G	G	G	G	G	G	
5	Ga	Ga	Ga	Ga	Ga	Ga	Ga	Ga	
6	X	X	X	X	X	X	X	X	
7	G	G	G	G	G	G	G	G	
8	RB	RB	RB	RB	RB	RB	RB	RB	
9	RX	RX	RX	RX	RX	RX	RX	RX	Bb
10	∘	∘	∘	∘	∘	∘	∘	∘	
11	RB	RB	RB	RB	RB	RB	RB	RB	
12	G	G	G	G	G	G	G	G	
13	Gb	Gb	Gb	Gb	Gb	Gb	Gb	Gb	
14	RB	RB	RB	RB	RB	RB	RB	RB	
15	G	G	G	G	G	G	G	G	
16	∘	∘	∘	∘	∘	∘	∘	∘	
17	RB	RB	RB	RB	RB	RB	RB	Bc	Bc
18	G	G	G	G	G	G	G	G	
19	∘	∘	∘	∘	∘	∘	∘	∘	
20	∘	∘	∘	∘	∘	∘	∘	∘	
21	Gc	Gc	Gc	Gc	Gc	Gc	Gc	Gc	
22	∘	∘	∘	∘	∘	∘	∘	∘	

FIG. 88A

Scan Pass s7 Time t1923

Line	1910	1912	1914	1916	1918	1920	
1	RX	RX	RX	RX	RX	RX	Ba
2	X	X	X	X	X	X	
3	X	X	X	X	X	X	
4	G	G	G	G	G	G	
5	Ga	Ga	Ga	Ga	Ga	Ga	
6	X	X	X	X	X	X	
7	G	G	G	G	G	G	
8	RB	RB	RB	RB	RB	RB	
9	RX	RX	RX	RX	RX	RX	Bb
10	∘	∘	∘	∘	∘	∘	
11	RB	RB	RB	RB	RB	RB	
12	G	G	G	G	G	G	
13	Gb	Gb	Gb	Gb	Gb	Gb	
14	RB	RB	RB	RB	RB	RB	
15	G	G	G	G	G	G	
16	∘	∘	∘	∘	∘	∘	
17	RB	RB	RB	RB	RB	Bc	Bc
18	G	G	G	G	G	G	
19	∘	∘	∘	∘	∘	∘	
20	∘	∘	∘	∘	∘	∘	
21	Gc	Gc	Gc	Gc	Gc	Gc	
22	∘	∘	∘	∘	∘	∘	

FIG. 88B

Scan Pass s7 Time t1924

Line	1910	1912	1914	1916	1918	1920	
1	RX	RX	RX	RX	RX	RX	Ba
2	X	X	X	X	X	X	
3	X	X	X	X	X	X	
4	G	G	G	G	G	G	
5	Ga	Ga	Ga	Ga	Ga	Ga	
6	X	X	X	X	X	X	
7	G	G	G	G	G	G	
8	RB	RB	RB	RB	RB	RB	
9	RX	RX	RX	RX	RX	RX	Bb
10	∘	∘	∘	∘	∘	∘	
11	RB	RB	RB	RB	RB	RB	
12	G	G	G	G	G	G	
13	Gb	Gb	Gb	Gb	Gb	Gb	
14	RB	RB	RB	RB	RB	RB	
15	G	G	G	G	G	G	
16	∘	∘	∘	∘	∘	∘	
17	RB	RB	RB	RB	RB	Bc	Bc
18	G	G	G	G	G	G	
19	∘	∘	∘	∘	∘	∘	
20	∘	∘	∘	∘	∘	∘	
21	Gc	Gc	Gc	Gc	Gc	Gc	
22	∘	∘	∘	∘	∘	∘	

FIG. 88C

Scan Pass s7 Time t1926

Line	1910	1912	1914	1916	1918	1920	
1	RX	RX	RX	RX	RX	RX	Ba
2	X	X	X	X	X	X	
3	X	X	X	X	X	X	
4	G	G	G	G	G	G	
5	Ga	Ga	Ga	Ga	Ga	Ga	
6	X	X	X	X	X	X	
7	G	G	G	G	G	G	
8	RB	RB	RB	RB	RB	RB	
9	RX	RX	RX	RX	RX	RX	Bb
10	∘	∘	∘	∘	∘	∘	
11	RB	RB	RB	RB	RB	RB	
12	G	G	G	G	G	G	
13	Gb	Gb	Gb	Gb	Gb	Gb	
14	RB	RB	RB	RB	RB	RB	
15	G	G	G	G	G	G	
16	∘	∘	∘	∘	∘	∘	
17	BR	BR	BR	BR	BR	BR	Rc
18	G	G	G	G	G	G	
19	∘	∘	∘	∘	∘	∘	
20	∘	∘	∘	∘	∘	∘	
21	Gc	Gc	Gc	Gc	Gc	Gc	
22	∘	∘	∘	∘	∘	∘	

FIG. 88D

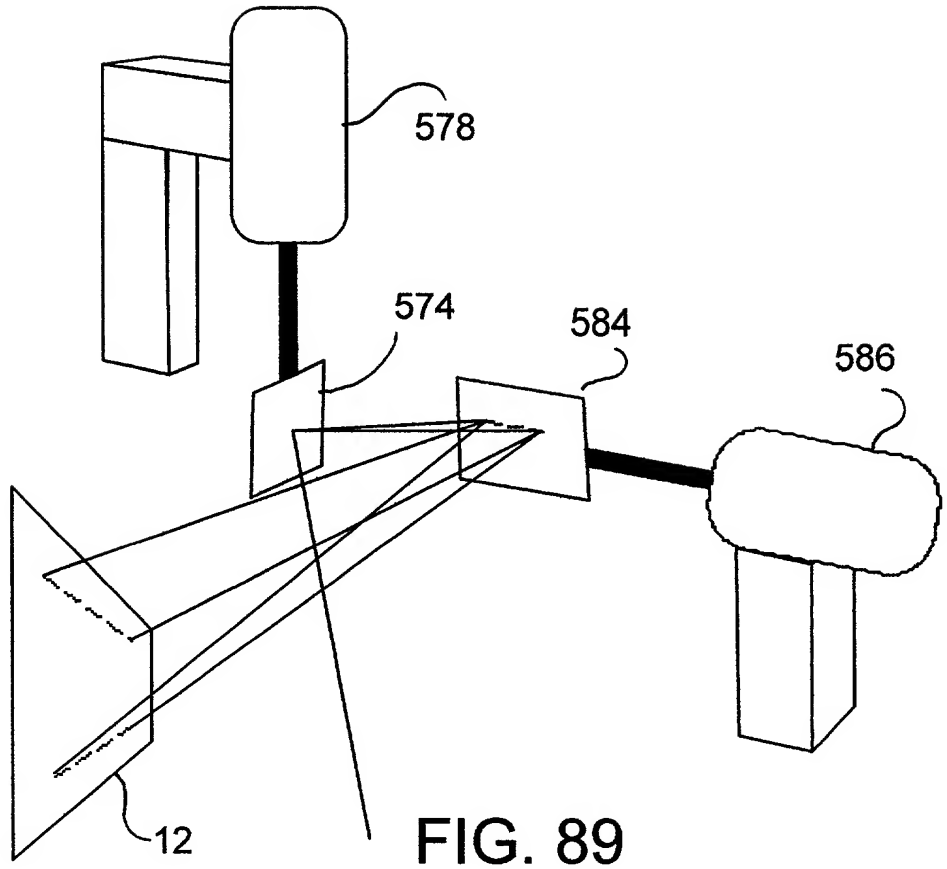


FIG. 89

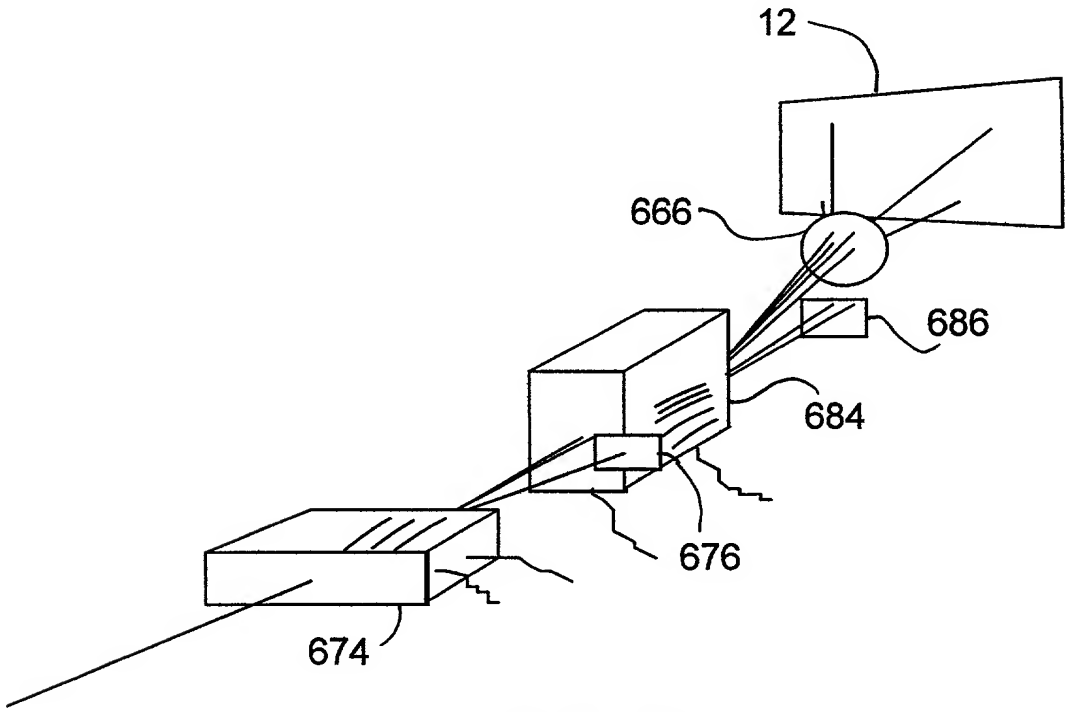


FIG. 90

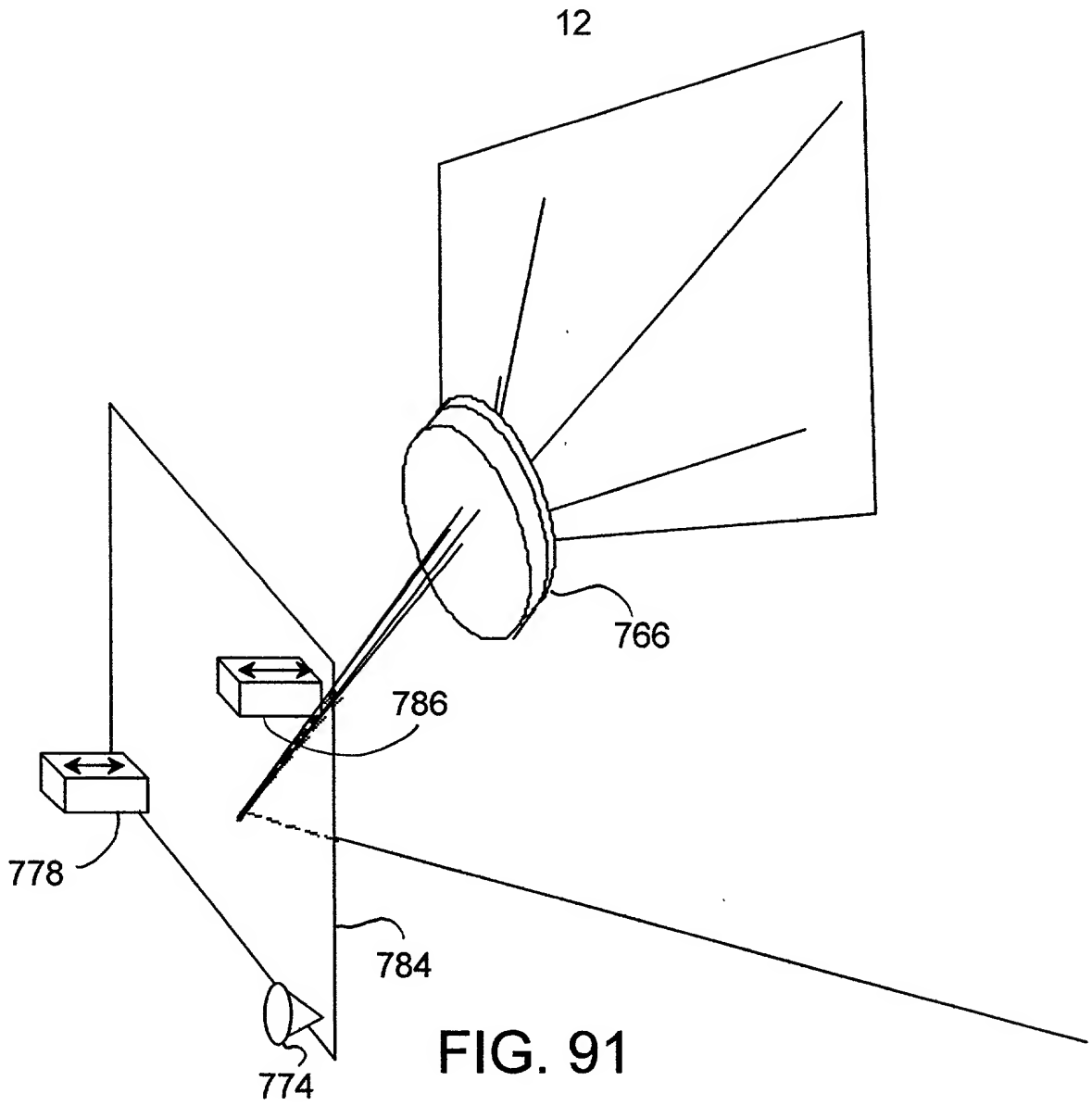


FIG. 91